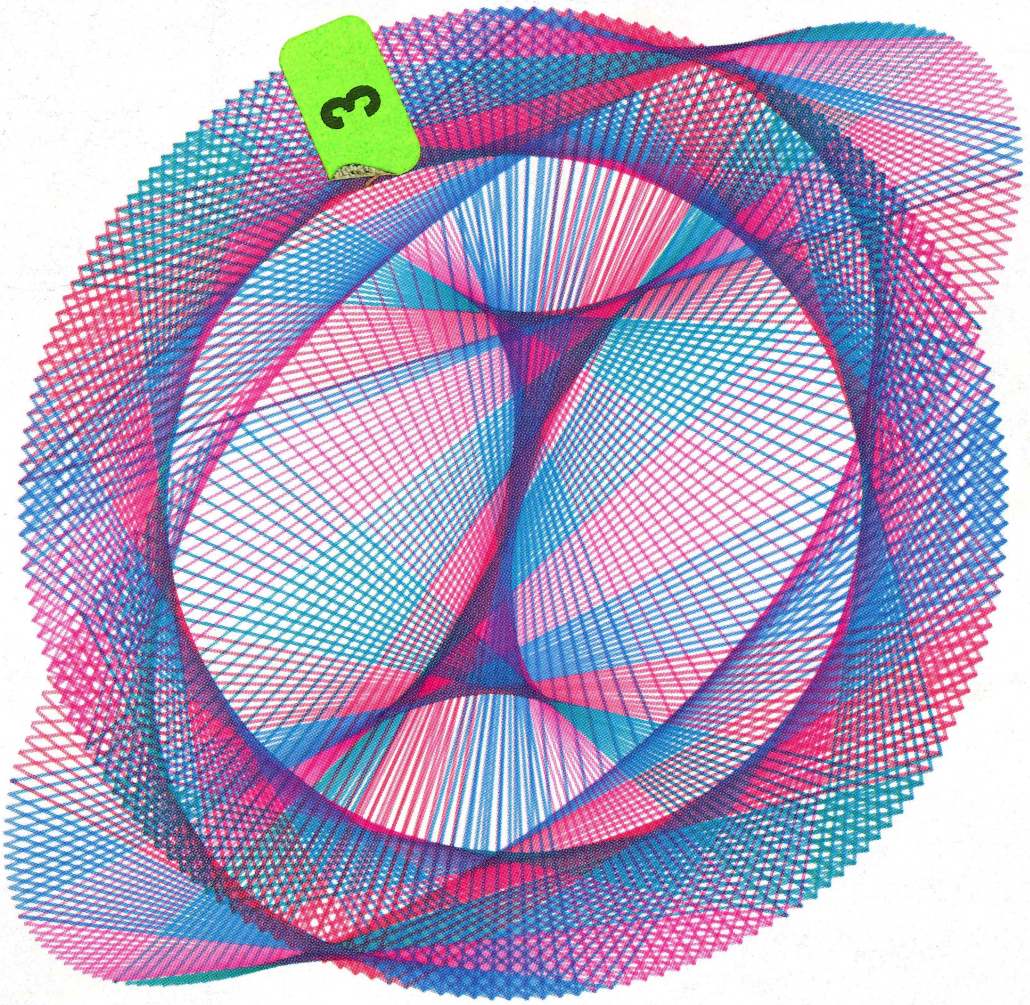
$2.95

EPSON CONNECTION

JULY 1984



EPSON
EPSON LQ-1500
Minor miracle.

Or how Epson® got two astonishing printers to occupy the same space. The new LQ-1500.™

You've never seen anything quite like the new Epson LQ-1500 Business Printer. It switches effortlessly back and forth between draft and letter-quality printing, on fanfold* or single sheet paper. And it does it at a price every office can afford.

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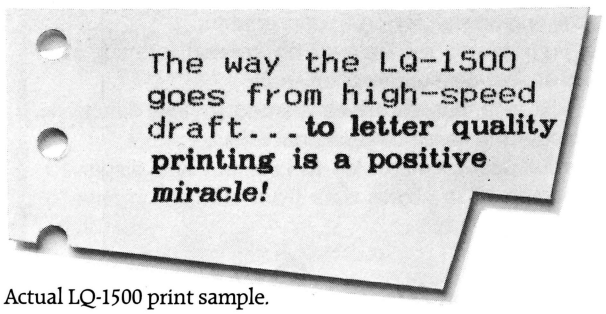

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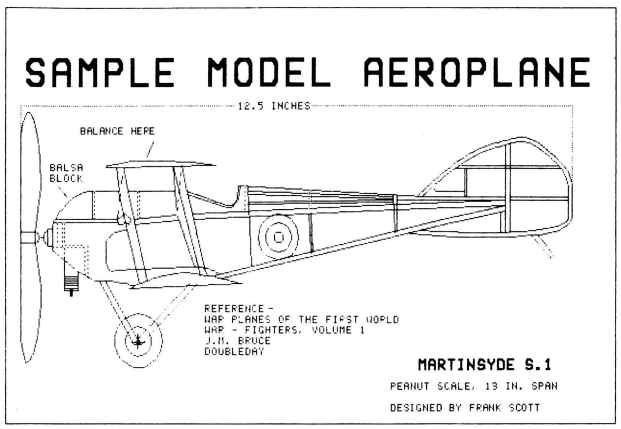
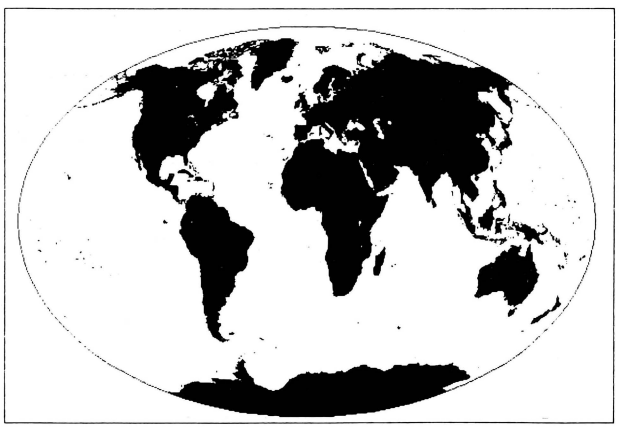
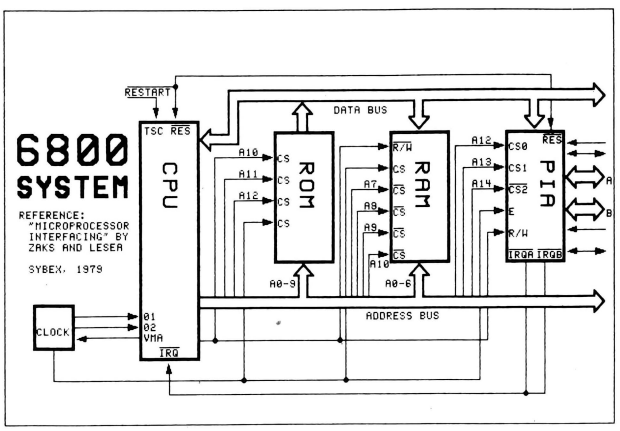
WHAT IS QXDRAW?

QXDRAW is a powerful graphics design tool that exploits the excellent graphics capabilities of the Epson QX-10. It allows someone unfamiliar with computers to design and draw figures, charts, schematics, or blueprints in no time. QXDRAW has the capability to store, retrieve, and print figures drawn on the screen. In addition, it can fully manipulate figures and text by changing size, angles, and dimensions.







QXDRAW —

- Provides an easy-to-use cursor that can be moved about the screen.
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- Draws circles and ovals easily.
- Allows solid, dotted or dashed lines to be used.
- Allows lines of varying thickness to be used.
- Includes "area fill" capability.
- Features the Epson function keys: HELP, UNDO, STORE, RETRIEVE, PRINT, INDEX, and STOP.
- Allows text to be displayed at any location, size, or angle.
- Stores and retrieves the screen display on disk.
- Prints the screen display on Epson printers.
- Allows figures and symbols to be created, stored, and retrieved at any location, size, or angle.
- Allows text and figures to be slanted in any direction, giving modern or three-dimensional effect.
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Letters to the Editor:

Dear Ms. McCarthy:

In the six months or so that I have been lucky enough to have been on the EPSON CONNECTION'S distribution list, I have learned a hundred times more about my computer than from all other sources combined!

I've been a subscriber to several other computer periodicals during that time and, if anything, I've noticed less QX-10 information than before I bought my computer. If you caught the March 5, 1984 issue of InfoWorld you would have noticed that they seem to have written us off. See their comment, page 57, that the Epson market represents only 0.3% of their interest - I'd have figured that there were more EPSONS than that in Denver!.

Perhaps it might be appropriate for the EPSON CONNECTION to try to keep its members posted on which computer periodicals are really interested in our business! I read a whole Personal Software issue last month without seeing a single thing I could use. What a waste of time and money!

Thanks!

Richard E. Goodrich,
Littleton, Colorado

Gentlepersons:

As an owner of an Epson QX-10 (acquired in June 1983) I am grateful for THE EPSON CONNECTION.

It is the only Epson related product that functions as advertised for instance:

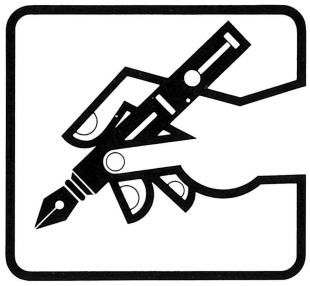
1. The QX-10 does not enter a file with the same reference name on successive days as claimed in the Valdocs User's Guide on page 5-4, "One of Valdocs most unusual features is that you can use the same index reference for more than one document"; -- not so. it wipes out the previous file of the same name.
2. The Epson FX-100 printer ("QX-10 compatible") will not even reproduce all the characters on the QX-10 keyboard.
3. The Comrex CR-II printer, with keyboard, will not print in red as alleged in the advertising.
4. And how on earth does one get into the telecommunications mode?? Page 5-33 of the VALDOCS USER'S GUIDE says, "A modem, in conjunction with Valdocs MAIL program opens up a whole new world of computer discovery. Try it! You'll soon see what they mean". To "try it" I purchased a Hayes Smartmodem 1200. Its HARDWARE REFERENCE MANUAL says, "If you are not certain how your equipment is wired, check the manual supplied by the the manufacturer of the equipment or contact your computer dealer". I still don't "see what they mean". Nor have I been able to find out.

The worst part is that inquiries to Epson and their distributer are ignored and their dealers say that they get the same treatment.

I appreciate THE EPSON CONNECTION. Though if the QX-10 documentation were not so unbelievably miserable, the Connection might not be so popular!

Thank you for your consideration of my needs.

Sincerely,
Beardsley Graham,
Bend, OR



Sirs:

Our publication is getting bigger and better with each issue. My compliments to all of you who are responsible for it and I am delighted to see that it will soon be published on a monthly basis.

Best regards,
Stewart F. Davis
Syracuse, NY

Dear E.C.

I really enjoy the articles you're writing but what I like even more are all the ads you have with all the latest products for the QX-10 . I never thought I'd say that about a magazine. I'm just glad that other companies are realizing the potential of the QX-10.

Sincerely,
Kent D. Loose
Miamisburg, Ohio

**Kent, see the June issues of Creative Computing, and Personal Computing for features on the Epson Products.*

▲ ▲ ▲

Editor's Note

You will have noticed a different look with this issue, the first of our monthly editions. We will continue to develop the style, and uniformity of our articles and reviews throughout this, our second year of publication. Our primary goals are to continue to provide the most up-to-date information on products for your Epson computers, useful tips, and be an educational resource for your continued learning in the computer field. We continue to rely on your feedback. I want to take this opportunity to thank you for contributing to our growth. Without your contributions: articles, user tips and questions, we would never have come this far.

Epson America, Inc. has begun a large advertising campaign, and is showing up in increasingly more magazines. The June issues of both Personal Computing (an interview with Mr. Y. Tsubota), and Creative Computing (QX-10 Hardware Review) had very positive things to say. User support will be growing from both Epson America and Rising Star Industries. Epson will be adding on an 800 number BBS support line, and Rising Star has already taken a similar step with three systems providing software support to their products. Speaking of their products, the RSI Basic will be available this month for $100. This will be the first of a variety of software products from RSI.

The proliferation of BBS boards available with Epson programs is heartening. The calls have kept the EpsonConnection RBBS busy almost non-stop 24 hours a day. There are several of the EpsonNet boards with HX program areas on them as well as our own, so HX'ers take heart.

Hope you enjoy our new format.

LET YOUR EPSON SPEAK FOR ITSELF!

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The QXSPS Speech Synthesizer Board

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- **HX-FORTH** Language (2-8K Proms-Cassette of utilities) $195.00
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  counters, many options including D/A
- **HX-20 TECHNICAL MANUAL** over 360 pgs with schematics $40.00
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QX-10

- **CP/M 'B'** version with CP/M & Mbasic Manuals (Ram Disk) $30.00
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- **QX-10 TECHNICAL MANUAL** over 220 pgs with schematics $40.00
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  Operating Systems installed. 10 to 84 Mbyte Capacity
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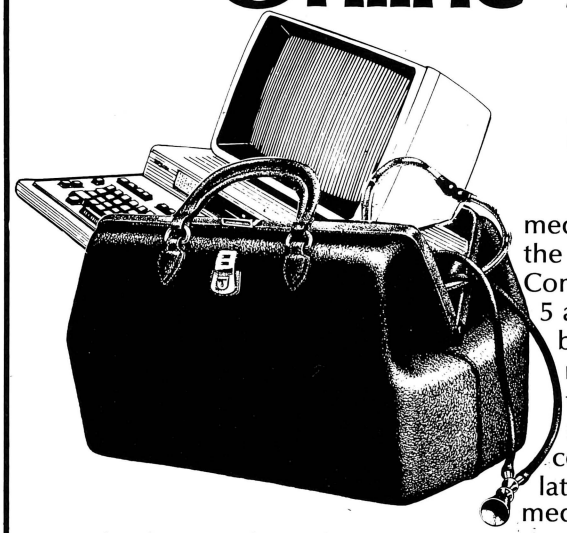
The Online Medical Connection



by Bob Herman

The first article in this series related an overview of some of the services available online. In this discussion we shall survey the telecommunications options available to the medical profession, and briefly examine some of the factors that should be considered before subscribing to any encyclopedic database.

In all the professional fields today the amount of information one must absorb to remain current is staggering. The number of specialized journals itself is overwhelming. The use of online encyclopedic databases and other online services offers a means of synthesizing and utilizing these vast resources.

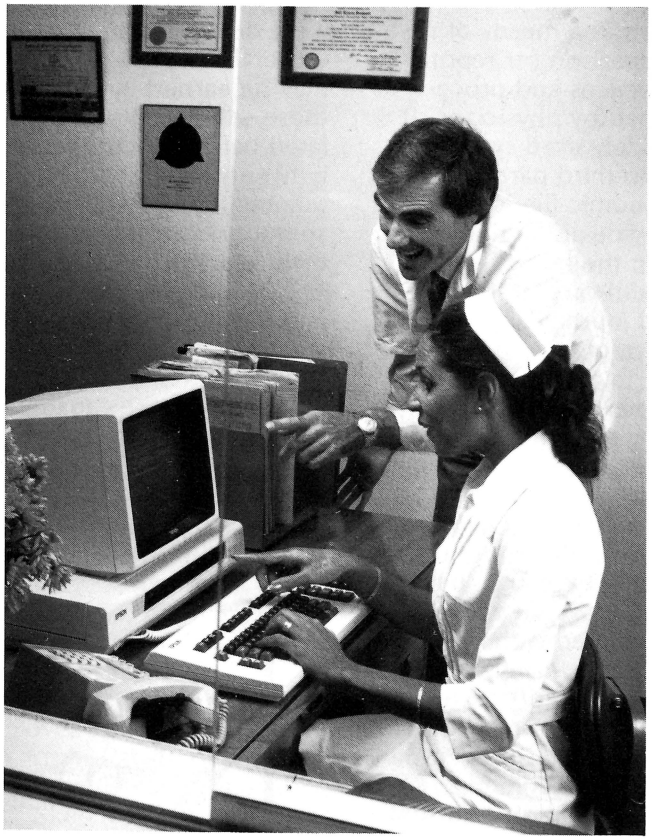
AASMI

It is fitting to first discuss an organization whose primary goal is to deal with the vast amounts of information referred to above through the use of computers. The American Association of Medical Systems and Informatics (AASMI) relates its primary purpose as the exchange of medical information as well as providing assistance with the use of computers in medically related activities. It boasts of being the largest medical computing assocation in the nation. Accessed through CompuServe (by entering Go SFP-5 at a command prompt), it may be considered a structured journal/newsletter, offering members the capability to send and retrieve messages, participate in online conferences, access medically related information, and obtain medically related software. The 11 databases found on AASMI include: General/Misc, Emergency/ Spec Care, Comm/Mental Health, Rehab Services, Surg Specialties, Medical Specialties, Databases/ Med Info, Patient Care Svcs, Other Prof Act, and Primary Care. As a sample of what may be found in these databases, accessing the Database/Med Info file (by entering XA 7 at a command prompt while in the AASMI forum) reveals a program for refining data obtained from BRS for a bibliography file reference program. By entering GO-AAM at a command prompt, you will gain access to the ASMII quarterly newsletter. The Winter 1984 edition contains articles on drug use and adverse reactions, encoding medical information, and a hospital logistics system. An exhaustive listing of current articles on medical computing is presented, as well as meetings of interest and several book reviews. The afore mentioned services are available to anyone with a CompuServe subscription. By becoming a member of the AASMI itself (for $75/year), you may participate in other activities. The organization has fifty Professional Specialty Groups offering members the ability to interact with others in their particular specialty. The major emphasis in all of these groups is the incorporation of computers and telecommunications into the medical field, improving the organization and dissemination of medical information, to result in improved patient care. The activities of these groups include conferences, utilizing data networks for member interaction and knowledge development, identifying members to serve as consultants in specific areas, and evaluating reference sources and databases. An annual conference allows for the presentation of papers, panel discussions, and special sessions on particular topics of interest. Contact with the AASMI may be made on CompuServe, or by writing to the AASMI, Suite 402, 4405 East-West Highway, Bethesda, Maryland 20814 (301-657-4142). The American Society of Computers in Medicine and Dentistry also has a forum (or Special Interest Group) on CompuServe. Not as popular as the AASMI forum, it appears to be geared more towards the office setting and those who are just beginning to learn about the "world of computers in medicine". Find out more about this organization by entering GO-SFP-7 at a command prompt on CompuServe or by writing the organization at Box 21483, Upper Arlington, Ohio 43221.

ENCYCLOPEDIC DATABASES

Probably the best known medical encyclopedic database is Medline (or Medlars). Available on BRS, DIALOG, and Knowledge

dex, it covers more than 3000 medical journals and offers online abstracts. Searching procedures are still rather complex, but both BRS and DIALOG are implementing easier to use search techniques. One major problem with Medline is that there is often quite a lag between publication and appearance on the service - sometimes over six months. DIALOG has available (at less than half the cost of Medline) a practice file called Ontap Medline. This offers an opportunity for training and practice in online searching in the medical subject area. Also available on BRS and DIALOG is Exerpta Medica (or Embase). Embase contains many international journals and papers from congresses not covered in Medline and serves as a supplement. Embase is however, even more expensive and harder to use than Medline. The most comprehensive medical database is Biosis Previews. Covering more than 000 publications, it is oriented ore toward basic research than clinical medicine. Again it is available on both BRS and DIALOG. A unique database on BRS is the Critical Care Medicine Library. Critical Care offers the ability to quickly locate with standard search techniques topics in biomedical textbooks. This database may be one of the most useful options to the medical telecommunicator. A similar service available on DIALOG is called SUPERINDEX. SUPERINDEX offers only the reference to a particular book, not the full text, as is available on the BRS service. Pre-Med, available on BRS, offers coverage of articles in 125 key medical journals less than 2 weeks after publication. The speed with which articles are added to this database is its major attribute. The International Pharmaceutical Abstracts is available through both DIALOG and BRS. It contains individually indexed sections on adverse drug eactions, providing information hat may not be available in the Physicians Desk Reference. The IRCS Medical Science database on BRS offers the full text of articles online. The International Research Communications Systems thirty-two journals are available online simultaneously with publication. This is a rather expensive database and its features have not been fine tuned yet. The preceeding discussion of encyclopedic databases is by no means comprehensive. There are many, many more specifically oriented databases available to those in the medical field, especially on DIALOG.



MINET

The American Medical Association and Telenet have formed a medical information network called Minet. This service avails clinicians the use of several databases prepared under the supervision of the AMA. The user is presented with the following menu when entering the system:

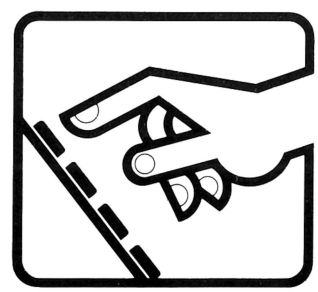
1. Drug Information Base (DRUG)
2. Disease Information Base (DIEASE)
3. Current Procedural Terminology (CPT)
4. Socio/Economic Bibliographic Information Base (SIB)
5. Clinical Literature Information Base (EMPIRES)
6. Start where you left off with your most recent session.

The Drug Information file contains information on the clinical use of more than 1100 drugs. Each drug listing contains information found in the PDR. But the use of keyword searching makes it possible to quickly locate specific drugs for specific purposes. Information is updated on a monthly basis. The Disease Information file contains the diagnostic features of more than 3500 diseases. Its primary purpose is to provide a synoptic reference to "standardize terminology and improve diagnosis." The ability of locating a specific disease by entering a particular sign, symptom or laboratory finding would seem to be a very useful function. However, words to be searched must be entered exactly as they appear in the index in order to get a hit. This database is updated twice annually. The CPT file is in-

tended to serve as a means of nation-wide comparison for reporting medical services and procedures performed by physicians. It is the most widely used system for reporting to third party payers. The Socio/Economic file is intended to provide aid in finding information on the non-clinical aspects of health care. It monitors more than 700 journals, providing bibliographic reference to areas such as cost containment, medical staff relations, insurance reimbursement, legislation, and management. Selection of the fourth alternative from the main menu accesses a Clinical Information database that monitors more than 300 journals. It is based on literature published by Medica Exerpta and is supplemented with AMA specialty and subspecialty codes to aid in the retrieval of articles. The first menu encountered offers the choice between: 1. Current Awareness Service (CA) and 2. Reference Service (REF). The Current Awareness feature allows searching for a primary topic and subtopic to obtain a listing of all relavent articles. Since Empires is supposedly updated on a weekly basis, this should be quite current. Choosing the Reference Service from the Empires menu allows you to use existing Minet commands to extract both current and reference key medical abstracts and citations from the Empires database. Searching may be accomplished by: title, author, source, date, document, AMA classification code, Exerpta Medica classification code, subject, or abstract. After a search strategy has been started, the hits are displayed in groups of 10 to 15 articles. Subsequent groups may be called up, but if you pass up something that you later decide is useful, you either have to redefine your search strategy and go through the process again, or if you have your printer on (like you should anytime you are making an online connection), you can use the eight digit document number to recall it.

Minet offers a series of continuing education programs that were developed at Massachusetts General Hospital. CME credits may be earned by participating in these self-paced, computer simulated patient encounters. Presently twenty different clinical topics, ranging from anemia to Infant Respiratory Distress Syndrome, are included.

Another feature of Minet is an electronic mail service known as Med/Mail. Featuring bulletin boards as well as personal communications, the capability to reproduce most standard report formats also exists. This capability can be used for such activities as supply ordering and reporting laboratory results.



A one time initiation fee of $100 is required to obtain a subscription to Minet. The individual databases cost between $25 and $35 an hour with a minimum monthly charge of $45. All of the mentioned features include online information and assistance in using the system. For further information contact GTE Telenet Medical Information Network, 8229 Boone Boulevard, Vienna, Virginia 22180 (703-442-2500).

WHAT TO LOOK FOR BEFORE SUBSCRIBING TO AN ENCYCLOPEDIC DATABASE

Before initiating a subscription to any encyclopedic database, the prospective buyer is wise to consider several factors. The most important consideration, of course, is does it offer what you want and can use. Next how easy is it to obtain information from? Is there some sort of mistake feedback mechanism giving you at least an opportunity to correct mistakes, or will a wrong doing leave you faced with a blank screen and no idea of what to do next?

Many databases have their own thesarus of search terms, with online access orlisting in the documentation. The ease with which you may relate to this thesarus and its similarity with other databases that you intend to utilize should be investigated. Can you determine how many variations of a particular term can be used? Exactly what elements are in each record and how many of these may you use to search? How does the information in the database correspond with hardcopies? May you incorporate Boolean logic in your search? Are you allowed to search ranges and fields? That is, can you specify certain dates fo be searched and where in the article a searched word appears (in the title, text, abstact, or footnotes)? What exactly are your print, display, and storage options? Is it feasable to transfer search insructions from one database to another? And can you review your search strategy?

Some services offer a very useful (and usually very expensive) function called Selective Dissemination of Information. With this feature you may design a search, and every time the database is updated your search is automatically carried out and the results forwarded to you.

One way to investigate these factors is to contact the customer service departments of a particular service, noting their response to your queries. The degree of assistance offered by these departments is often a good guage of the performance of the system itself.

As we have seen there are a variety of telecommunications services available to the medical professional, ranging from rather inexpensive Special Interest Groups to more expensive encyclopedic databases (some of which cost more than $300 an hour). Choosing the right service to meet your needs is now the task.

▲ ▲ ▲

Software Review

Qplotter

by Ron Spatafora

SPEC SPOT

Product: Qplotter
Type: Special Graphics
Computer: Specific to the Epson QX-10
Operating System: TPM v.2.40 early versions, with the new program slated to run with CP/M B
Required Peripherals: Optional: plotter, mouse, joystick
Price: $250.
Ease of Use: User friendly using special function keys
Performance: Good
Documentation: Good
Summary: Qplotter is a graphics program enabling the user to draw, create, store and retrieve figures, create animation effects, use the zoom features, and special graphics effects available with the NEC7220 GDC chip.
Manufacturer: Metro Software Inc. (MSI)
2504 N. Campbell Ave.
Suite 214
Tucson, AZ 85719

QPLOTTER is a Bit Mapped graphics program. It utilizes the features of the NEC 7220 Graphics Display Controller, within the QX-10. The resolution of the system is an awe inspiring 1280 by 800 pixels (IBM eat your heart out). You must currently create a TPM systems disk or use Valdocs to execute this program. Metro Software stated they are planning to provide the new version of Qplotter to work with the CP/M 2.2 B release. MSI provided an overlay which fits nicely on the keyboard. There are alot of commands, and the overlay is not only a nice touch, but necessary. The program works with all Epson printers, but is best suited to plotters. The demo running at the COMDEX show in Atlanta was most impressive. Included in the package are several demo programs. You might want to run these first as they will give you an idea of what you're in for. MSI has recently added the lightpen/mouse option.

FEATURES

Among the deluge of available commands are:

1,2,3,4 to define which of four quadrants you wish to work in.
. ..... draw Points
A ..... draw Arcs
C ..... draw Circles
D .... draw Diamonds
E ..... Erase screen
F ..... turns Flash on and off
L ..... draw Lines
M .... Move window
O .... Overlay-lay one figure over another
P ..... draw Parallelograms
R ..... draw Rectangles
S ..... Sketch-use your curser keys and sketch a drawing.
T ..... draw Triangles
V ..... change Vector pattern
W .... Write characters-Qplotter supports the ASCII and Valdocs characters/ graphics set.
X ..... draw aXis
Z ..... Zoom in and out

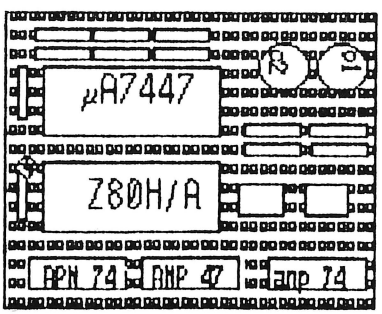


Fig. 1: Circuit Card by Qplotter

As I mentioned before, there is a substantial command set. The above are not the only commands. QPLOTTER makes use of 27 HASCI keys as well. The keys perform: copy, rotate, block, bold, italize, enlarge (ZOOM) and reduce, turn on and off crosshairs, stop action, undo and of course there's a Help key and many more.

Running the program will require a through examination of the well written manual. With the aforementioned commands and keys, you need not ask why. When you get into the program, you will start to appreciate the many other additional features, such as Pattern Fill, an option to fill in your figure with one of many patterns. This came in handy when I drew the Circuit Card (fig 1). At the bottom of each screen is a status line to let you know what quadrant you're in, what direction you figure lies (you may rotate it 360 degrees), where your cursor is (X,Y), what your current overlay is, what plotter pen color has been selected and other items. There is a preprogrammed figure library. When you select one of the figures (diamond, rectangle, etc.) it will draw the figure. You may alter it in size, shape, rotation aspect and even Zoom in on it. If you make a mistake, press UNDO to erase it. You may add and subtract figures from a field (quadrant), overlay them, manipulate them or even animate them. Making figures move around the screen, is a feature just added. For the technical types out there, you may create a figure library of up to 64 symbols/ figures. From this library you can call up a particular figure (NPN transistor, box, shape, etc) and place it on the screen. As with the canned figures, you can also play with your created image. This feature is akin to some of the more sophisticated CAD/CAM programs (only here you save $40,000!). The Patterns allow one to create quasi-shading which appeared desirable for mechanical/architechural users. Of course, anything you cre-

Con't on page 32

Free $49.95 program when you buy SmartKey II

SmartPrint II is SmartKey II's super companion program. Now, with single-stroke commands, SmartPrint II can make your dot matrix printer do dozens of tricks. Italics, greek characters, graphic symbols, boldface, underlining, extended typefaces, accent marks, and so much more are all easy to do. Great for some letter quality printers too. Central Computer Products will send you a free copy of SmartPrint II, a $49.95 value, with your purchase of SmartKey II. Please read about SmartKey II elsewhere in this ad. To take advantage of this value-packed offer, send for SmartKey II today. By the way, we must reserve the right to end this offer. Don't be disappointed, order today.

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Top quality, individually tested 36 pin Centronics-type standard parallel cables for the Epson QX-10. Made to work hard and long.

5 ft cables ... $19.95 each
10 ft cables ... $24.95 each

Top quality, individually tested RS-232C cables designed with reinforced clamps for a sure continuous connection and made especially for your Epson QX-10. Buy here and save.

2 ft cables ... $15.95 each
5 ft cables ... $19.95 each

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ComRex I single strike ribbons . . . . $12/box of 6
ComRex II single strike ribbons . . . . . $4 each
ComRex II multi-strike ribbons . . . . . $5.35 each
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New. Two-piece Sailcloth Cover. Expert tailoring. One piece covers the monitor and the CPU and a separate cover protects the keyboard. Specify Navy or Sand. $21.95. Order today.

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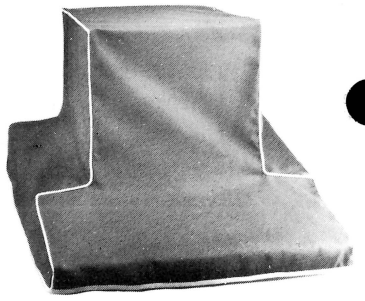
Introducing A Classic Form Fitting Epson Cover

Photo: Form-fitting cover over CPU, monitor, and keyboard.



At last, the classic Epson dust cover you'll be proud to own and use. This first rate computer cover is made from a premium, lint free, static free, washable, free breathing, and fade resistant sailcloth. It comes in a rich looking Navy blue or Sand. The Navy cover has a smart contrasting silver gray piping and trim that adds a superior finished look. Not to be outdone, the Sand cover is handsomely finished in a rich chocolate piping and trim.

This remarkable form-fitting dust cover makes you feel good and will keep your Epson dust free and looking brand new for years to come. For a limited time only, your price for this factory direct, custom made, sailcloth Quality Cover is $18.95. When ordering remember to indicate color preference. This special low price is subject to change. You must be completely satisfied with your purchase of this cover or we will refund your money immediately. Order today.

Matching sailcloth printer covers for all Epson printers and ComRiters are $14.95 each.

- Quality tailoring
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- Professional appeal

Richly tailored inside and out. Look inside any of our Quality Covers; see the ultimate finishing; we use machines that sew with 3 needles so that edges will not unravel or shed lint. We stress perfection because you deserve the best. Compare for long-lasting satisfaction.

FACTORY DIRECT

"Just about every conceivable question that a reader might have will be found [answered] somewhere in this book."
The Epson Connection
March/April 1984

Epson owners are talking about ...

The Epson QX-10 User's Guide published by Scott, Foresman and Company, March 1984, is hot off the press, and is causing quite a stir among Epson owners. It's no wonder too. The author, James M. Hansen, is an independent consultant and professional hardware and software engineer, and is uniquely qualified to thoroughly explore and explain the architecture, capabilities, and uses of the QX-10. This lavishly illustrated book has 80 photos and takes you on a grand tour of your Epson's unique internal and external features. The author explains how the Valdocs operating system, and the CP/M and TP/M II operating systems work. In addition, Hansen discusses how run basic programs, create business graphics, use Peachtree Software, and much more.

The 159 fact-filled pages of *The Epson QX-10 User's Guide* are jam packed with complete, accurate information and technical advice that makes this book an invaluable tool. Hard facts explored here include advice on the selection of printers, modems, speech synthesizers, and unique expansion cards that enhance the Epson's built-in capabilities. If you want to learn more about your QX-10 and how to get real computing power from it, put this book on your desk. It pulls no punches. Our price for this extraordinary book is only **$17.95**. Order today to get this book fast.

"Spikes and surges can be the greatest threat to your computer outside a 4 year old child with a jelly sandwich aimed for the disk drive slot."

Enemies of Epson ... Spikes, Surges, and Noise!

The Epson has enemies. But now you can protect it from the mish mash of electrical currents that race through your home or business. Powerful up-surges of current can actually blow out your machine. Less powerful, barely noticeable spikes, surges, and noise can silently degrade your system in time, ruining chips, destroying data, and causing expensive service calls.

The plain truth is: "Line filtering will protect your computer...from power surges or other undesirable occurrences from the power source." Surge protection will help your Epson provide years of trouble-free service. Also, if you plan to use your Epson to access information by modem, you must have a reliable high frequency noise (EMI/RFI) suppressor to insure against data loss and scrambling.

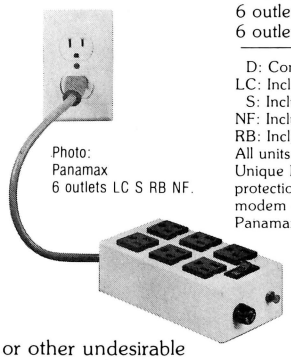


Photo:
Panamax
6 outlets LC S RB NF.

PANAMAX SURGE SUPPRESSORS

Description	List	Price
2 outlets, D	$89.00	$59.95
2 outlets, D NF	$109.00	$69.95
4 outlets, LC S	$107.00	$79.95
4 outlets, LC S NF	$127.00	$99.95
6 outlets, LC S RB	$124.00	$99.95
6 outlets, LC S RB NF	$144.00	$109.95

D: Connects direct to grounded wall jack.
LC: Includes 6 foot long heavy duty line cord.
S: Includes illuminated on/off switch.
NF: Includes EMI/RFI noise filter.
RB: Includes reset button.
All units include the added security of a 4 amp fuse. Unique Panamax EMI/RFI noise filters provide protection in common and transverse mode. Essential for modem communications, multi-user stations, etc. Panamax units are factory guaranteed for 24 months.

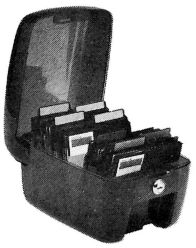
"Power line-associated problems are estimated to cause nearly 70 to 90 percent of the malfunctions in the IBM PC."

"Overvoltage can be fatal to both data and hardware alike."
P.C. Magazine, March 1983

There are many "toy" surge suppressors on the market. They are smartly colored, but beware. The performance difference is amazing. The best surge and noise suppressors on the market are made by Panamax. Our "Panamax Challenge Certificate" tells all. It is a startling comparison of Panamax quality with 11 other well-known brands. One aspect of this revealing report tells how Panamax responds to and cuts surges in 5 or less pico seconds, while most other suppressors respond at a comparably slow 5 to 50 nanoseconds!

Check our regular low prices. Try the Panamax of your choice for 15 days. Receive the "Panamax Challenge Certificate" with your purchase. If not completely satisfied with your purchase, return for immediate full refund. Your Epson deserves Panamax protection, the best there is. Order today.

Lockable Diskette Defender



Handsome, sturdy, smoke-tinted acrylic tray holds 70 Epson-size diskettes. Flip-up lid keeps out dust, debris, and moisture, and locks securely to guard your important work. Comes with 7 dividers with index tabs for easy filing and to keep floppies upright to prevent bending, warping, and scratching. Tough and secure metal lock never comes in contact with diskettes because it is enclosed in a special plastic housing. Super value at $23.95 for one, or $22.95 each if you buy 2 or more. Keep prying eyes and sticky fingers away from your data. Order today.

Price Protection

We have a super price protection policy: Central will match or beat any price you see listed in this publication on products also advertised in our ads. Buy from us. If you see a lower price in another ad in this publication, tell us when you order, or within 30 days of your order. We'll refund the difference, or match, or beat that price. That's a promise. Try our friendly service today for affordable, price-protected, lightning-fast deliveries. Ask for our free catalog.

SmartKey II™, A Computer User's Secret Weapon

Tens of thousands of computer users have discovered a secret weapon that attacks and eliminates boring, repetitious routines and, at the same time, speeds up and improves accuracy in computing. Now, if you use CP/M programs on your Epson, you can use this secret weapon too.

SmartKey II, the software program that Peter McWilliams and others rave about in their popular computer books, lets you redefine your keys at any time, even while your other software — such as Peachtext, Wordstar, dBase II, etc., is in operation.

Imagine writing your friend Rumpelstiltskin a letter? Since you don't want to upset the little guy by misspelling his name, choose any key on your Epson to be temporarily redefined to spell out "Rumpelstiltskin" every time you touch it. Spell it right one time and it pops into your letter each time you press your "Rumpelstiltskin" key. SmartKey II makes it possible.

SmartKey II's amazing features include: allowing you to assign up to 3,750 characters to a single key; letting you define over 300 special function "smart keys;" and providing an exclusive supershift feature that lets every key have up to four meanings. When you use SmartKey II, you'll find once you've redefined your mundane keys into "smart keys," you can store your definitions in a special file, put them to work anytime you want, and make new definitions or change them at will. Imagine saving complex command codes, boilerplate paragraphs, sentences, nouns, inventory numbers, or whatever, and then recalling each of them with the stroke of a single unique key. That's right, call up your specially designed "smart keys" whenever and wherever you want, and inject them into your work. This "secret weapon" is a must-have software program for all Epson QX-10 users including writers, lawyers, doctors, accountants, researchers, secretaries, programmers, and businessmen.

No matter what you do with your Epson's CP/M operating system, SmartKey II is a time-saving "secret weapon" you can't afford to be without. Anyone can break into fast computing today by reducing often used multiple keystrokes to single keys. SmartKey II can even make your Epson's special HASCI keys come alive and be productive in CP/M programs.

Now, for a limited time only, Central Computer Products will give you a free copy of SmartPrint II, a $49.95 value, with your purchase of SmartKey II. SmartKey II comes with a complete, easy-to-use manual and is only $89. To get this super package fast, order today. Don't delay. If you use your Epson frequently, SmartKey can save you many thousands of tedious keystrokes. Imagine the time and money you'll save by using this excellent program. Order today.

QX-10 CP/M Software

Ashton Tate	**Fox & Geller**	**Oasis**
dBase II	QuickScreen	The Word Plus
	QuickCode	
Blue Chip		**Pearlsoft**
Millionaire	**Mark of Unicorn**	Personal Pearl
	The Final Word	
Condor Software		**Softcraft**
Condor I	**MicroPro**	Fancy Font
Condor III	Wordstar	
	Reportstar	**Sorcim**
Continental	Infostar	SuperCalc
Home Accountant	Mailmerge	SuperCalc II
Digital Marketing	**Microsoft**	**Star Systems**
Milestone	Multiplan	Accounting Partner

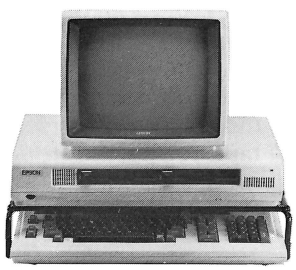
Do You Wish Writing Were Easier?

If you need to write, or want to write clearly, your Epson CP/M operating system and the software program *Punctuation and Style* can help you get there faster. It improves, clarifies, and enriches your writing by identifying sentences with misused, redundant, faulty, cliched, or erroneous phrases, and shows you how to improve them. It helps you rewrite and check your work by quickly marking and annotating your files for easy correction. In addition to computer-fast identification of awkward, muddy, pompous, and wordy sentence structure, it also finds missing or improper punctuation, unbalanced quotes, wrong abbreviations, faulty capitalizations, and much more. *Punctuation and Style* actually improves your writing by mercilessly pointing out grammatical errors. After a few weeks with Oasis System's *Punctuation and Style* your writing is bound to become more dynamic, expressive, and honest. In time, you'll stop worrying about grammar and work on projecting ideas instead. After all, that's what writing is about.

Punctuation and Style makes writing and rewriting much easier. Central's price for *Punctuation and Style* is $99. Experience the power of this valuable "Punctuation Checking and Writing Improvement Software" yourself. Order today to get this program fast.

Punctuation and Style works on files created with most popular CP/M word processors. It comes with an easy to use, clearly written manual and is packaged in an attractive binder. Join thousands who now write with more confidence, faster, and better.

Perfect Epson Stand



Simple, strong sturdy, safe. These words describe an attractive stand that provides a perfect spot to place your Epson computer and monitor on. This stand is made from rounded, steel rods covered with a thick, shiny, soft, black polymer material that protects your Epson and table top from scratches. Unlike flat wood or acrylic panels used in other stands, the tough supporting rods of the Smart Stand (TM) do not obstruct air flow. In fact, since your Epson is lifted off the table top and fully supported by this stand, air flows freely all around your computer to help keep it cool. When you're finished computing, you can slide the keyboard completely under the stand to create a working area on your desk. Incidentally, lifting your QX-10 off the table top makes it much easier to insert and remove diskettes out of the disk drives. The Epson Smart Stand is a super value at $34.95. Try it for 15 days. If not completely satisfied, send it back for a full refund. Matching 80 or 130 column printer stands are only $26.95. Order today.

Copy 32 Disk Formats

Until now, when you wanted to trade data disks or programs with your friends you couldn't do it without going through considerable trouble and expense. With *Uniform* you can easily read and write many other machine formats. For example, now you can send a Kaypro-using friend your latest manuscript for editing or review; or send a Televideo-owning business partner new financial projections on a disk he can read and write to. There are literally thousands of uses for *Uniform*. With *Uniform* you can use the disk drives on your QX-10 to read and write 31 other CP/M formats. You can also copy the non-CP/M, MS-DOS and PC-DOS IBM formats. You might expect a software program like this to sell for hundreds of dollars, since writers, publishers, teachers, administrators, doctors, lawyers, and others, all need to trade data at one time or another. MicroSolutions, the manufacturer of *Uniform* recently raised the price of this program. Considering its many practical applications, it's a rare value at $69.95. This version works with both CP/M and CP/M B. Order *Uniform* today. Satisfaction Guaranteed.

Lifetime Guarantee!

3M Double-Sided Double Density soft-sectored diskettes are certified error-free, and work like a charm on Epson QX-10s. Every 3M diskette is guaranteed to last over 3.5 million passes per track. This means if you rewrote or updated every track on a 3M diskette once per hour, you would have to continue this process for more than 200 years to equal the 3.5 million pass level. Heavy duty reinforced hub ring also insures reliability of these diskettes. We guarantee lifetime performance of 3M disks or money-back.

Our 3M products are super value priced. For example, suggested list price of 3M DSDD diskettes is $60. Central's low price for a fresh, sealed box of ten 3M DSDD diskettes is $32. There is no better diskette made for your Epson. In addition, these 3M products are also excellent values: 3M head cleaning kits increase the life of your read-write heads; 3M anti-static mats protect Epson micros from damaging jolts of static discharge. For fast, fast delivery of these 3M products, order today.

3M DSDD diskettes for Epsons: **$32.00**
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3M DeskTop Anti-Static Mats: **$49.95**

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Please send me the items listed below. I want fast friendly service. If I have ordered SmartKey II, don't forget to send me a free copy of SmartPrint II, regularly $49.95. My check, money order, or credit card number is enclosed. Thanks.

Description	Price
Sub-Total	
CA Resident 6% Tax	
Postage & Handling	$ 3.00
Total	$

FIRM MONEY BACK GUARANTEE ORDER WITH CONFIDENCE

☐ Navy blue ☐ Sand
☐ Send free catalog ☐ Send free SmartPrint II
☐ Check enclosed ☐ Money Order enclosed
☐ Visa/Mastercard # _____
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Phone Orders Accepted.
To order by mail use coupon, letter, or photo copy. Thank you.

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Users Group– Part 3

When Your Meetings Get LARGE!

by Ron Lippitt

My short case studies of designs for productive meetings in the Jan/Feb and Mar/Apr issues of the Epson Connection were focused on meetings of 5 - 25 persons. Your editor tells me that some of you are involved in larger meetings of 25 - 75 or even larger. The question she asked was, "How do you design and lead large meetings of people with mixed interests, different levels of skills and varied needs for support?"

Let me recommend several guidelines, and then illustrate them briefly and give you some references for further reading.

Guidelines

1. When your group is larger than 20 or 25, a significant portion of your meeting time should be spent in subgroup meetings.
2. The purpose and plan of the session needs to be available to everyone so they know their roles and options.
3. The furniture needs to be arranged in subgroup seating clusters instead of classroom style rows.
4. Leadership of subgroup activity should be delegated.
5. Creative ways of reporting to the whole group need to be used to prevent boredom and overload.
6. The subgroupings should be divided based usually on the interests, needs, or experience of the participants.
7. Some of the basic tools and materials to facilitate communication should be available and used, e.g. large newsprint sheets and magic markers, overhead projector, a mike if more than 50 persons. Masking tape for putting report sheets on the wall, etc. should be available.

Some Illustrative Meeting Design Elements and Ingredients

1. At the meeting or from a mailing, members check a one-page listing of potential interest group topics. A single checkmark should be given to topics of interest and double checkmarks to the two or three of highest interest (e.g., use of Valdocs, advanced software programs available, creating software, etc.).
2. As people enter the room and get coffee, have a list of subgroups for that session available, with table numbers or room areas indicated. They will be able to sign up for their subgroup choice as they come in.
3. Have one member of your group ready to function as a subgroup convenor for each of the subgroups that might be chosen.
4. Have a startup general session before going to subgroups. This will include time for announcements, explanation of the agenda, show of hands surveys, brief presentation of general interest items, panel dialogue on a topic of interest, a demonstration, etc.
5. Volunteer task forces can do fact finding and prepare reports. Usually the need for such a task force is announced in the general session, a signup sheet for volunteers is on the wall, or passed around. There is time at the end of the meeting for a 10 minute meeting of the task force to choose a convenor, or co-convenors (preferably). A time for a meeting may be agreed on and any pre-meeting homework identified.
6. When the need for a small 4-7 person steering committee is identified, the group members call out, for recording on a sheet up front, the criteria for selection of a steering committee. Then all members fill out a nomination sheet with 5-10 nominations for committee members and star their top 4 choices. These sheets will be used to identify a steering committee that has the balance indicated by the criteria that were listed.
7. A brief lecturette is often part of the meeting program. All presentations should be broken into units of not more than 10-12 minutes. Listener subgroups of 3-5 persons may participate and have 1-2 minutes to share "what's the most important thing I've heard", or "What's a question of clarification", or "What's an example in my experience of what they are presenting." If the presentor wants to complete the planned remarks before responding to the questions, then the questions are called out, listed on a sheet up front, and the lecturette continues.
8. Reports from subgroups are often necessary. There are a variety of ways of handling subgroup reports. One procedure is for each group to do a one-page wall sheet summary and after a reading period, ques-

tions are asked and comments made. Another procedure is a one-minute report from a group representative followed by questions and comments. Another favorite procedure where a duplicating machine is available, is for the subgroup to do a 1-2 page summary, or make recommendations, for distribution to everyone. A reading period where everyone goes around reading the sheets is desirable before discussion.

You will find many other suggestions in the references at the end of these notes.

Here is an example of the design of a large group meeting.

Further help in designing and conducting meetings can be found in these references:

Taking Your Meetings out of the Doldrums by Eva Schindler-Rainman and Ronald Lippitt, University Associates, Inc., 1975.

Making Meetings Work by Leland Bradford, University Associates. University Associates Inc., 8517 Production Ave., P.O. Box 26240, San Diego, CA 92126.

▲ ▲ ▲

Time Estimate	Activity, Method, Grouping	Person(s) Responsible	Materials Handouts, etc.
20 min.	Startup activities as people arrive -- make name tags, sign register, check interest group choice, pick up handouts and agenda for meeting, hands on exhibits	Meeting Leaders	Overhead projector Big sheets, Magic markers Chairs arranged Coffee/tea Name tags
15 min.	Convene meeting, announcements, review agenda, introductions of newcomers, etc.	Jim	Pass out agenda
25 min.	Presentation/demonstration of new software program Sit in small groups, generate questions and utilization ideas	Marie	Newsprint sheets, Computer, etc.
30 min.	Interest subgroups meet with meeting facilitators (choose one-minute reporter)	Member of Steering Committee in each group Documentors	Designated space arrangement
20 min.	Seven one-minute reports with questions, action on recommendations, total group meets	Reporters preside	
20 min.	Collective brainstorm of ideas for future programs, priority voting Volunteers for task force to develop 24 hour computer mailbox and member newsletter	Jim Brainstorm recorder	Up front writer Signup sheet
10 min.	Set future dates Fill out meeting evaluation and suggestion sheet Adjourn	Co-leader	Handout evaluation sheet
20 min.	Linger longer group sits with steering committee to plan future programs		

EPSON QX-10 FINANCIAL DISC

Amortization schedule
Principal plus interest
Compound interest
Inflation investment analysis

Outputs to screen or printer

COST: $20.00

Payment by check or money order must accompany your order.

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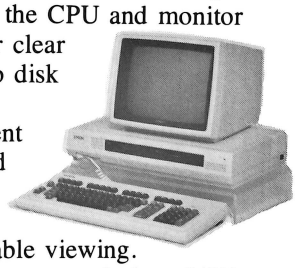
PRICE REDUCED ON THE QX-10 STAND

This custom stand for the QX-10 elevates the CPU and monitor 3½" for clear access to disk drives, convenient keyboard storage and comfortable viewing.



Made from crystal clear 3/8" acrylic with polished edges and soft rubber feet, this stand is sturdy, elegant and very practical. **Our new low price** makes it an outstanding value.

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(plus $3.00 shipping)

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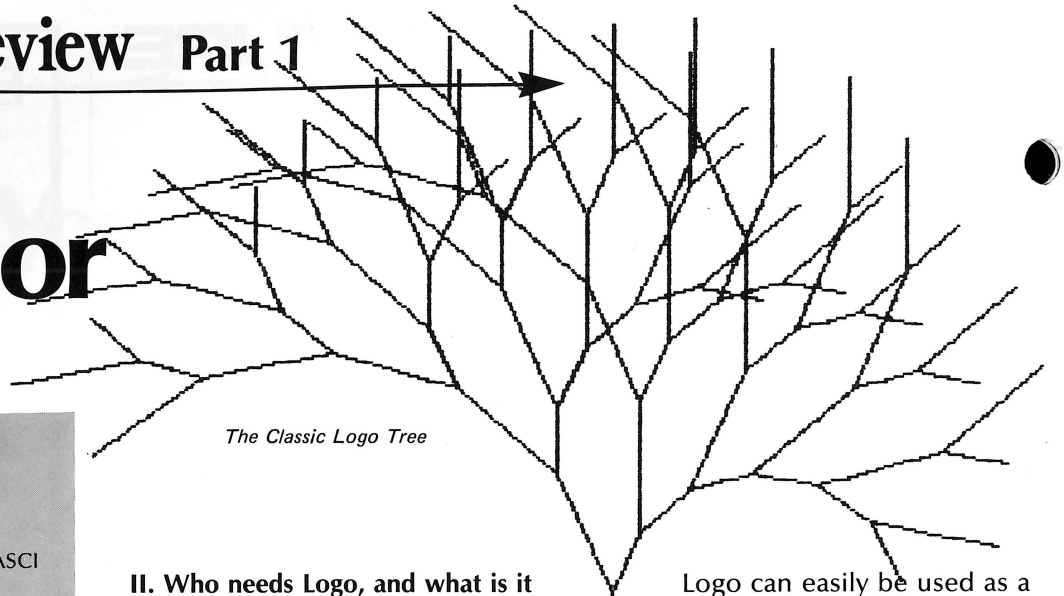
Software Review Part 1

LOGO Professor

by Judy Pope



The Classic Logo Tree

SPEC SPOT

Product: LOGO PROFESSOR
Type: programming language
Computer: Epson QX-10 with HASCI keyboard
Operating System: includes "auto-boot mini operating system"
Required Peripherals: none
Price: $99.95
Ease of Use: simple
Performance: adequate for beginners
Documentation: the on-line help is better than the manual
Summary: This product will be best used as a substitute for games or for casual explorations into the basics of the Logo language, but is inadequate for serious programming.
Manufacturer: Acorn Publishing, Inc.
1335 West 134th Street
Gardenia, CA 90247

I. What is Logo?

Logo is a programming language which anyone can learn. Logo is being used more and more in schools as an introductory computer language, and is fast replacing BASIC because of its adaptability to many levels and subjects.

Turtle Graphics is by far the major reason for its popularity. This is the graphics world of Logo; it uses a small pointer (usually known as the turtle) which you move about the screen by typing such basic commands as: FORWARD 100 (that's 100 turtle steps, not really very far) and LEFT 60 (those are actual degrees of turning). You can ask the turtle to draw pictures or just tiptoe about invisibly.

Logo is also a philosophy of learning, a tool to think with. At the heart of this is Logo's inherent structure, a style which encourages the user to think in chunks and simplify each problem until it becomes practically trivial to solve.

II. Who needs Logo, and what is it good for?

Anyone, from children, computer novices and other non- tech types to futurists and AI fanatics, can find alot to get excited about in the Logo language.

1. For the new computer user who hasn't tackled anything beyond Valdocs--this version of Logo may be the best way yet for you to discover the joys of teaching the computer new tricks. Lose your fear of The Monster Within the operating system as you discover what makes it hop to your commands.

The turtle is the ultimate non-threatening message receiver, and he serves you with engaging charm. After awhile even the most serious "grownups" start thinking of things from the turtle's point of view, and try to keep him happy. (You will wonder if he minds hanging upside down waiting for you to tell him which way to turn, or if trotting out your latest batch of large numbers will make him tired, etc.) When you really mess things up he will just politely tell you where you took a wrong turn, and give you every chance to recover your balance.

2. For children ready to use the computer as a tool, Logo is a perfect substitute for those expensive "canned" educational programs. These programs are usually made to test specific skills at a few rigidly controlled levels, and are not much good for long-term use by any one child. On the other hand, there are few limits to Logo's usefulness in the hands of imaginative children (and their parents).

Logo can easily be used as a random sentence-generator, a spelling or math quizzer, and many other text-based applications. These procedures are simple to change at any time to suit the needs of your child. You do not need to learn programming in order to key in and use the hundreds of available procedures listed in numerous periodicals and books.

3. One of the most innovative uses of Logo has been with the handicapped. Using the real turtle robot, physically handicapped children are able to explore space in ways which have been denied to them. Logo can also become the key to understanding children with learning disabilities. Their ability to control the turtle and to create a finished product is often the first step toward meaningful communication with others.

4. For those of us who feel compelled to follow developments in expert systems and other Fifth-Generation ideas, Logo can become an entry point into the world of LISP programming. Read more about this in Part II coming soon.

III. Logo for the Epson

After over a year with no Logo at all for us Epson users, there are suddenly two very different versions to choose from. Logo Professor by Acorn Publishing Co. is the subject of this review, and is an adequate version for beginners. There is also a vastly more powerful version, written by The Lisp Company, called TLC-Logo, which will be re-

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viewed in a future issue. Digital Research has also released a generic CP/M Logo in an OEM version only; this one would require writing your own assembly language IO system.

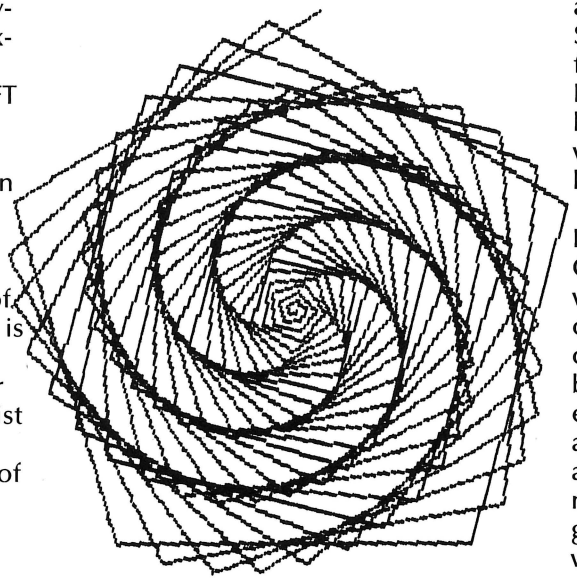
Most Logos have closely followed the LCSI Apple Logo "standard" due to its widespread popularity, and Acorn's Logo Professor is no exception. Most of the primitives (basic commands) in this version are identical to those in Apple Logo. This will make it easy to use most of the procedures listed in the many books about Logo, since they almost invariably refer to Apples Logo syntax. The only thing you will need to change is to type everything in lower case letters (except for the colons and quotes, which do require using the SHIFT key).

Typing is very easy using Acorn's Logo. Logo Professor can be successfully used by non-typists of all ages, since the STORE and RETRIEVE keys make file handling practically foolproof. Although the Apple Logo syntax is not overly complicated, you would be amazed at the number of ways a beginner or a non-typist can mess up the following command: LOAD "SAMPLES". One of my students tried five or six "variations" on the above command before giving up in frustration.

Pressing the RETRIEVE key in Logo Professor automatically prints the command retrieve and leaves the cursor in the exact spot for you to type the desired filename. Most of the other function keys work in the same way; the DRAW key allows instant printing of your graphics, the PRINT key toggles the printer on and off for text printing, INDEX gives you a list of your disk files, etc. The arrow keys can be used instead of Control-key sequences to move the cursor as in Valdocs. All these single-keystroke commands are quite convenient for fast editing.

Another nice feature for beginners is the way the HELP screens operate; when you press the HELP key to get help, the procedures you have in your workspace (ie. the computer's memory) are saved in a temporary disk file called RESTART.LGO. Then when you leave the help area, everything is restored to you, and you are further reassured upon seeing a list of your procedure names as they are loaded back into your workspace. This is done without any effort on your part. The HELP screens are also clear, direct and simple.

The written documentation, unfortunately, isn't nearly so helpful. In addition to being quite sparse it is poorly written. Beginners will need to consult at least one of the more complete Logo manuals for help in understanding the concepts of programming in Logo. After introducing a subject, Acorn's manual just leaves you with this sort of rhetoric: "recursion...will produce results that are astounding," and "these sample procedures...may suggest to you the awesome potential of LOGO PROFESSOR." This may be fine copy for advertising, but it is hardly what you need to hear when you are trying to learn something!



Another serious flaw is the amount of workspace available to the user, a constant problem to the Apple Logo user. Space in Logo is described in terms of nodes, which are five-byte blocks, and the increased nodespace available is a strong selling point in the newer versions of Logo for the IBM. Apple Logo can give the user no more than approx. 2700 nodes. Acorn's Logo Professor has a maximum of 2000 nodes, and this includes space "set aside for internal functions." That is simply not enough for more than the simpler text procedures, and is extremely disappointing given the 256K available to the programmers who wrote this for the QX-10. It looks as if the Apple "standard" Logo has been duplicated with its limitations intact.

Acorn's Logo Professor has been written along the lines of Valdocs, with what is advertised as "State-of-the- Art...Simplicity." Simple is exactly what Logo Professor is; no more and no less. Like Valdocs, you can take it home, plug it in, and start using it with (for most people) very little hassle indeed.

If all you ever expect from Logo is elementary Turtle Graphics, Acorn's Logo Professor will satisfy you. If not, TLC-Logo can give you a new dimension in computing power. But you should be aware that this is no LCSI clone; many of the more powerful features of LISP are available to you, and the syntax is correspondingly more complex. You do, however, get a multitude of dancing turtles who can all change shape, lay down trails of hearts and flowers in addition to lines, print messages to each other on the graphics screen, etc, etc... Stay tuned for further developments.

IV. Where to find more information about Logo

Acorn's Logo Professor-available through your Epson dealer, or write:

Acorn Publishing
1335 West 134th Street
Gardena, CA 90247
price--$99.95

TLC-Logo
The Lisp Company
P.O. Box 487
Redwood Estates, CA 95044
price--$100

Logo newsletters and magazines:
Turtle News and TLComputing

Logo Professor

Young People's Logo Association
1208 Hillsdale Drive
Richardson, TX 75081
214-783-7548
The National Logo Exchange
Box 5341
Charlottesville, VA 22905

The August 1982 issue of BYTE and the August 1983 issue of Popular Computing have several articles about Logo.

Books:

You can take your pick from a large number of introductory books about Logo; most of them have much the same sort of content. Beyond that level, there is almost nothing available, with the exception of these two unique and valuable books:

Turtle Geometry by Harold Abelson and Andrea diSessa. Cambridge; The MIT Press, 1980. ($25.00)

Thinking about TLC Logo, A Graphic Look at Computing With Ideas, by John R. Allen, Ruth E. Davis, and John F. Johnson. New York; Holt, Rinehart and Winston, 1984. ($17.45 paperback)

I have made a list of most of the currently available books, newsletters, and magazines about Logo, and will be happy to send a copy of that list to all who send me a self-addressed stamped envelope.

Judy Pope
1729 Highview Road
Ellsion Bay, WI 54210

Notes: In 1970 Judy received a B.A. in Russian from Bryn Mawr College. Several years ago she started teaching the gifted elementary classes in her local school system. Last spring Judy bought an Epson and promised to learn enough about computers to teach her students. She was delighted with her discovery of Logo, and has been using various Logo programs ever since. The latest project has been a "Choose-your-own Adventure" story written in Logo by her students.

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PREVIEW: The Reading Professor
by Judy Lewis

Most of us secretly compare ourselves with those around us. The Reading Professor gave me the opportunity to look at a skill which I have always wanted to improve and yet was hesitant about the benefits of exaggerated speed reading courses. After all, I always countered such advertisements to myself by saying, "I read for content, not speed".

I was impressed with the ease of operation of the Reading Professor and the user friendliness of the documentation. Just using the demonstration disk over a three hour period my reading speed increased approximately 25-30% and my comprehension increased slightly more.

I was concerned that the reading passages would be too difficult for my eleven year old (he is not much of a reader). However, he stayed with an entire lesson which lasted for about 15 minutes and was interested in doing some more. I am anxious to have The Reading Professor for my whole family to use and enjoy. For a more "in depth" report, stay tuned next month.

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VALBOTS ANYONE?

In the June issue of Popular Computing there is an article about a robotics firm called Denning Mobile Robotics. This company has signed a contract to produce robot guards for a manufacturer of detention equipment, Southern Steel Co. in San Francisco. The robots will be 4 foot tall, 200-pounds, and be equipped with infra-red sensors, cameras, ultrasonic sensors, and sniffers.

Immediately upon reading this information I began imagining what a conversation might be like. The guard robot *Valbot,* and *TP,* the prisoner:

TP: "Hey you,how do you unlock this door?"
Valbot: "Insert Disk"
TP: "Well bring the disk here"
Valbot: "Press retrieve please"
TP: "How do I retrieve something?"
Valbot: "Press Help for instructions"
TP: "OK Help"
Valbot: "Working, please wait....."
TP: "God, this could take forever"
Valbot: "Please indicate if GOD is an indexed or non-indexed file"
TP: "(Gulp) I..I see you have a menu. Can you at least get me something to eat?"
Valbot: "Press menu to exit to TPM (The Programmers Medium), run a program, or select the menu of applications"
TP: "Exit? Say that's what I've been trying to do. Thank you Valbot. You've been alot of help. (presses) EXIT."

All becomes dark and blank, looking around TP sees a faint blinking light near a figure the shape of an A with a sort of arrow.... > ... perhaps pointing the way out.

Valbot: "Hah, dangle a caret in front of him and he'll follow it anywhere....."

Stay tuned for Part 2.0 "The escape to TPM-3".....

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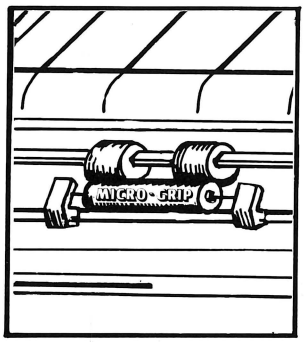

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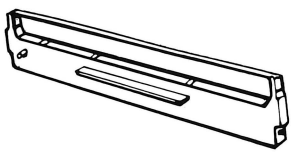

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Dis 'n Data

by Ralph G. Ruh

TPM

We will commence our comments this month by exploring further into the interesting world of our TPM operating system. A reader has asked what the advantages of using TPM over CP/M are, and another queried "Now that I have it what do I do with it?". Well, both are very good questions and deserve answers. Please remember that my remarks are purely subjective and reflect my own opinions.

If you were to compare the two operating systems you would find that both share many things in common.Each system use's the same command syntax such as DIR, ERASE, SAVE, RENAME, TYPE, etc. TPM II has the ability to manage the full 256K of your systems primary memory banks versus CP/M's memory management, which is limited to 64K in the CP/M 2.2 versions. I have stated before that TPM II is much faster than CP/M and I continue to stand by that statement. In addition TPM II has the ability to be able to run both CP/M versions 1.4 and 2.2 programs. One of the most remarkable features of TPM II, which I find very useful is its ability to execute a program from any user area or drive location. The program being executed does not have to be physically located in the logged in area. As an example, suppose you are in User area 100 on drive B and want to run MBASIC which is physically located on drive A in User area 0. All you have to do is type in MBASIC and hit a return and TPM II will seek back to drive A, user area 0 and find the program and execute it. TPM II uses drive A, user area 0 for this purpose so don't be confused into thinking that TPM II will search all user areas for the program. This useful feature saves an enormous amount of disk space, since you only have to keep your most used programs on drive A. CP/M requires you to have the program that you want to execute to be physically located on that drive and in the user area that you are in. With this capability you may place many or all of your most frequently used software packages on different user areas and then log in the identical user area on the B drive as your data disk.

In a Hard Disk environment this feature becomes even more powerful because you can set up different user areas with different software packages and still retain the drive A and B relationship.As an example lets say you have the CITATION data base program in user area 5 on drive A. You log into this user area by using the following syntax; A5: RET. If you have CITATION configured to run as an A and B system, it will automatically use whatever user area the B drive is logged into. To run the CITATION software in drives A and B and in user areas 5 you only have to log into user area 5 on each drive and then execute the CITATION program. From that point on, all your data files will be saved in user area 5 on the B drive.

I hope that the above information has answered some of your questions as to what you can do with your TPM II operating system. If you work in the CP/M system then you should be able to work in the TPM II system and enjoy all of the above nifty features and more. The limit to its use is only controlled by the limit of your imagination. Experiment with it, use it and then report back to me the interesting things you have come up with so we can share that information with others.

For the beginning level or novice type user, TPM II can be a formidable task to undertake. However, if you are attempting to become more familiar with your computer it will be inevitable that you will have to learn to cope with the computers operating system. In our case that will mean that you will have to learn how to manipulate either CP/M or TPM II.The whole concept of our QX-10 system is to promote a friendly relationship between the computer user and the computer. VALDOCS has certainly gone a long way to advance this concept. Integrated software products such as VALDOCS are a thing of the present and the future, and its not difficult for me to see why EPSON chose to present the VALDOCS integrated software package using the TPM II operating system. It is an exciting system to work in and certainly deserves the attention of anyone interested in becoming more aquainted with their computer.

CP/M B

The new release of CP/M-80 B from Epson America certainly has a lot of people excited with its ease of use and many extended functions such as being able to program the top row of function keys on your HASCI keyboard. This system was pretty well summarized in the last issue so I won't spend too much time on it at this time. There is a "Bug" in the CP/M B system that needs to be taken care of right away. This bug was brought to my attention by Steve Brown our Indianapolis EpsonNet sysop. It seems that if you are programming in Mbasic and have to leave the computer for an extended time you had better save your program to disk before leaving the computer. It is reported that the 'Sleep' facility of CP/M B will lock up the system and cause you to lose all your data if the screen blanks out and you are still in Mbasic. This could cause some serious heart failure, especially if you have about 2000 lines of code typed in and find the system locked up after returning from breaking up a fight with the kids. So for now, SAVE your program first, then break up the fight.

It has also been reported to me that the program ASC.COM

will not function under the new CP/M-80 B release. As you may know this program does many things, one of which is the removal of control codes generated by VALDOCS and WORDSTAR. I have reported this information to the author of the program and I will get back to you with his response in the next issue.

Now for a report on the EpsonNet Rbbs/Rtpm Network. Your nationwide BBS network has just gone international as we now have a new system located in Caracas, Venezuela under the control of Emilio Pantner. We are looking forward to Emilio getting his system up and running and providing valuable service to the many Epson users in that country. We hope to be adding a system in England and Canada in the near future. Our network has grown to over 32 systems in less than six months, and has to be the largest network of its kind in the United States. None of this could have been accomplished without the hard work and dedication of all the system operators who have given up much of their computer time, and given much more of their own personal time to this project. I would like to express my personal appreciation to each network sysop for their fine efforts and hope that you will continue to grow with us in the months to come.

Our final comments this month will center around a program that many of you have asked for help with. This is the Library Utility by Gary P. Novosielski called LU.COM. The purpose of this program is in conjunction with the Bulletin Board systems. This program allows the user to download a complete package of related programs or text without having to use XMODEM for the transfer of each file individually. It also conserves disk space when the library members are in a squeezed form. See the Jan/Feb issue for a discussion on SQUEEZED files. When you see a file on the bulletin board systems with the .LBR extension this will alert you to the fact that this is a

Con't on page 35

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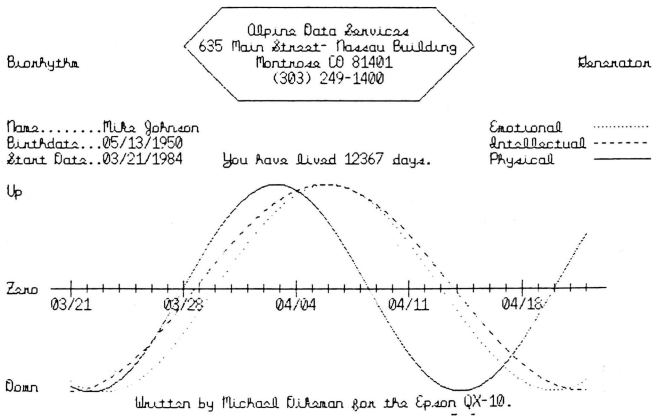

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Friday

by Ty Sfat

SPEC SPOT

Product: FRIDAY
Type: Database Management Program
Computer: Epson QX-10
Operating System: CP/M 80 Release B
Required Peripherals: None
Price: $295.
Ease of Use: Very Easy to use
Performance: Good
Documentation: Excellent and includes a six-part set of tutorial lessons.
Summary: Friday helps organize and analyze numeric and textual data. It can be used to manipulate files from dBase II and Lotus Development Corporations 1-2- 3.
Manufacturer: Ashton-Tate
10150 West Jefferson Blvd.
Culver City, CA 90230

What is Friday?

Normally when you hear friday, it means it is the last day of the work week. Not so here, Friday is the Girl Friday of computerized office file management. Friday is an offshoot of dBase II data management, designed so that anyone in an office can learn to use it quickly. The Hasci version of Friday is even easier to use because it incoporates the Epson Hasci keyboard so that instead of using the standard Friday or dBase control keys you use the function keys you've been accustomed to on your Epson, see figure 1.

What Will Friday Do?

Just about everything. It will:

Keep track of: Inventory, Customers, Suppliers, Sales, Job Costs, Personnel, Mailing lists, plus any other type of data file.

Create: Invoices, Paychecks, Sales Reports, Commission Reports, Custom Reports, Form letters, Mailing Labels, plus any other kind of report that can be drawn from your data files.

How does Friday Work?

Very well. However, there is one small criticism. Even though the Hascii keyboard has been utilized very effectively, the manual or documentation supplied has not been rewritten to incorporate the use of this keyboard. For example, in both the documentation and the sub-menus on the screen STORE has not been substituted for ^W nor INSERT for ^V, etc. (see fig. 1 for other substitutions). Thru experimentation, I've found that when entering formulas I can use the mathematical function keys on the numeric pad to indicate mathematical symbols such as "x" key for "*", etc..

After you insert your new application disk you can enter the Friday program by typing "FRIDAY" at the A prompt and pressing return. You can save time by making full use of your CP/M 80 Version B and have the Friday program autoload. You are now entering Friday. After you've accepted the default drives and entered the current date, Voila! the MAIN MENU:

A-Enter Data
B-Retrieve Data
C-Other Activities
D-Leave

You are asked "What do you want to do". If you choose A you will be able to enter data to existing files or create new files. The data disk supplied with Friday has an example file that is used for practice. Since you've chosen A the next screen will show an index of existing files (one) plus a menu asking if you wish to: Create a new file, Edit an existing file, Delete a file, Print List of files, Clean Up files,
RETURN to defualt to listed file, Choose a specific file, Show the design of a file, or return back to the main menu.

Let's CREATE a new file, nothing to it. Friday guides us right thru it. First it requests a new file name then a description of the file, now it shows a menu for a

Figure 1: Key Assignments for Friday! on the QX-10

FRIDAY! KEY	QX-10 KEY	FRIDAY! FUNCTION
^S	←	Moves the cursor left one character.
^D	→	Moves the cursor right one character.
^E	↑	Moves the cursor up one line to the first character of the preceding field.
^X	↓	Moves the cursor down one line to the first character of the next field.
^G	⌦	Deletes the character the cursor is on and moves the rest of the line to the left.
^V	INSERT	Toggles between the insert and overwrite modes.
^Y	SHIFT / ⌦	Deletes data from the cursor position to the end of the field.
^W	STORE	Saves current record and moves you to the next record.
^Q	UNDO	Ends the add session and returns you to the previous prompt. This function does NOT save the current record.
ESC	STOP	Interrupts printing, an emergency stop. MAR REL and SHIFT/MAR REL also stop action.
<	SHIFT/↑	Moves you backward through a file one record at a time.
>	SHIFT/↓	Moves you forward through a file one record at a time.
M	MENU	Returns you directly to the Main Menu.

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BASIC CORNER

The Basics of BASIC

by George Puckett

Have you ever felt you needed a full-time programmer to do all the things with your computer you always wanted to do— but don't know how? "Ah!", you say, "I'll just stop in at the corner bookstore and pick up a book on BASIC." Well, in contrast to its name, many people don't find BASIC all that basic. Hopefully, this column should at least get you and your Epson QX-10 started in this very popular (and powerful) programming language.

The first step, of course, is to find MBASIC.COM in all those disks you received with your new Epson computer. You'll find MBASIC on your CP/M disk along with CP+ and all the CP/M utilities. Start by turning on your QX-10. Place the CP/M disk in the left (A) drive and a blank formatted disk in the right (B) drive. After a few seconds you'll see the CP/M sign-on at the top of the screen and the ready prompt, A>on the left.

We are now ready to begin. Type:
A> MBASIC <cr> ; after a moment you will see:

```
xxxx Bytes Free
Microsoft BASIC Version x.xx
(CP/M Version)
Copyright 1981 (C) by Microsoft
Created: dd-mmmm-yy
OK
```

"OK" is BASIC's way of telling you, "Everything is functioning. I am ready and waiting for your commands."

Now, why don't we learn how to do something in MBASIC? In this and future columns we'll explore MBASIC and all the "tools" you'll need to use it. The first thing to know is that every BASIC program is made up of statements. Each statement begins with a number and the computer performs each statement in order from lowest to highest, unless we tell it otherwise. These line numbers must be greater than zero but less than 65529 and cannot have any decimal portion. Most programmers number their programs by 10's or by 100's. An example might be the program below:

```
10 REM This is a program
20 PRINT "10 divided by 5 equals ";
  10/5
30 END
```

If you'll notice, I used several tools or statements in the program above. The first one is the REM (or REMark) statement. This is just a comment line and is ignored by the computer. Its main use is to help make your programs more readable, both to you and to someone else who might be reading your program.

Our next tool is the PRINT statement. This is BASIC's way of communicating with you and the world. This will be how you display the results of your computations on the screen. The PRINT statement has at least 2 parts, the word PRINT and a number or equation to print. You may also print a message along with the number to help explain what it is.

The last program line, line 30, has just one word, END. This tells BASIC that the program is finished. You should always put an END statement in every program and also a way for your program to get there.

We'll go more in-depth next time. Two more things you might want to know: (1) How do I run this thing? and (2) How do I get out of MBASIC? Type RUN to get your program going and type SYSTEM to exit MBASIC and return to CP/M.

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George will be writing an ongoing column to help new users learn how to get along and use MBASIC.

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XM 16/48 Memory Expansion Board

by Bob Herman

SPEC SPOT

Product: XM 16/48 **Memory Expansion Board**
Type: Internal Memory Board
Computer: HX-20
Specifications: 16,384 Byte, 8 Bit RAM, expandable to 49,152 Bytes by Bank Switching
Price: 16K - $159; 48K - $399
Ease of Use: Very, installation somewhat involved
Performance: Good
Documentation: Detailed
Summary: The 16K version offers more versatility than the expansion unit; the 48K version needs development of the appropriate software to make it useful.
Manufacturer: Information Management Group, Inc., P.O. Box 2898, Satellite Beach, FL 32937
Article By: Bob Herman

An alternative to the Epson manufactured expansion unit for the HX-20 is finally available. It installs inside the HX-20, not altering its external dimensions, and allows up to 48K of additional memory (by bank switching). Both 16K and 48K versions are available. The 48K version is described here.

The board comes with 4 pages of installation instructions and 8 pages of "operating" instructions. Installation requires disassembly of the HX down to removal of the mother board. Although the instructions are complete and easy to follow, this procedure would best be performed by an authorized service representative. Because CMOS circuitry is involved, precautions are necessary to avoid "blowing" a chip due to static electricity.

One portion of the installation instructions merits attention here. Because of the internal configuration of the HX, when the actual mounting of the board into the computer is accomplished, it is impossible to actually see if the connection is properly achieved. The instructions attempt to overcome this difficulty by saying, "These should be carefully pressed together until audible contact is made." No such contact "noise" was apparent during our installation.

With the board installed, there are several advantages over the external expansion unit that are immediately noted. First is the obvious and aforementioned size factor. Even more significant, you are now able to turn off, actually map out, SkiWriter and have the full 32K (29,282 bytes) of RAM memory free. This also can be accomplished with the external expansion unit, but involves removing its back to flip the appropriate dip switches.

A few points about the HX need to be understood. Only 64K (RAM and ROM) of memory is addressable by the computer at any one time. Now that you have just put a board with 48K of RAM into the HX, and already have the 16K of resident RAM memory present, you would think that 64K of RAM is now available. Indeed, one of the operating modes for the board offers this configuration. But with this mode of operation you no longer have the HX-20 Basic interpreter (which takes 16K of ROM) present, so all applications have to be either in machine language or in FORTH.

The 48K board offers three different modes of operation. In brief, they are: mode 1, which is exactly the same as an HX with the expansion unit and SkiWriter; mode 2, which offers 64K of RAM by bank switching; and mode 3, the 64K configuration referred to previously.

Mode 1 allocates memory as follows:
16K RAM (Internal RAM)
8K RAM (Expansion RAM)
8K Application ROM (SkiWriter)
16K HX-20 Monitor
16K HX-20 Basic interpreter

To enter this mode, you select Monitor from the main menu screen of the machine. Type in SFEFD (cr) and you should see displayed a memory bit that contains an 8 in the last digit. If there is no 8 in the last digit (or lower nibble), hit (cr) (thus sequentially displaying the next memory locations) until you find one that does. With this particular board it was necessary to move two memory locations to find a proper nibble. Now you merely type in whatever value was displayed, thus telling the machine to write into memory this number at this location. Typing a "." will end the display of memory contents. Exit the Monitor by pressing the menu key; reinitialize the computer, and you are ready to go with SkiWriter available and 21090 bytes of free RAM (exactly the same as with the expansion unit).

The second mode of operation disables SkiWriter, leaving 29282 bytes of RAM memory. The memory in mode 2 takes the following configuration:
16K RAM (Internal RAM)
16K RAM (Expansion RAM) in each of three different "banks"
16K HX-20 Basic interpreter
16K HX-20 Monitor

Again, all that is required is to enter the Monitor and type in the appropriate codes, telling the board how you want it configured. With the 48K board, there are three 16K banks of memory to choose from, accessed either through the Monitor or in Basic by simple POKE statements.

To illustrate the capability of this configuration, a small program was written. A different number was poked into all of the memory locations of each bank and verified for existance after accessing the other banks.

Having an extra 32K of RAM memory accessable offers several obvious options for extending the capabilities of

Math Tutor

by Bob Herman

SPEC SPOT

Product: Math Tutor
Type: Educational
Computer: Epson HX-20
System: HX-20 with Microcassette Drive
Required Peripherals: None
Price: $20.00
Ease of Use: Easy to use menu

If the response is correct, you are rewarded with a little musical tune and a vote of confidence on the screen (such as "wonderful" or "perfect"). Incorrect responses elicit a dubious sounding tune and a "wrong" on the screen. Three more opportunities to calculate the correct response are then offered. If, in four trys, you have failed to correctly

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Software Review

XM 16/48 Memory Expansion

by Bob Herman

SPEC SPOT

Product: XM 16/48 Memory Expansion Board
Type: Internal Memory Board
Computer: HX-20
Specifications: 16,384 Byte, 8 Bit RAM, expandable to 49,152

the HX, when the actual mounting of the board into the computer is accomplished, it is impossible to actually see if the connection is properly achieved. The instructions attempt to overcome this difficulty by saying, "These should be carefully pressed to-

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the HX. Since the RAM file area of the HX resides in upper memory, where, from the preceding example it was seen that the "banks" of memory are located, it would be possible to define three different 16K RAM file areas in the same program. For instance, a data base program. You could obviously design a much larger RAM file area than was previously attainable. It would also be feasible to keep three separate data bases for the same program in memory simultaneously by offering, within the program, a choice of access to the respective banks. This would then avoid the hassle of recording and reloading the respective data for each database. These options and other alternatives that exist do require the development of the appropriate software.

The third mode of operation maps out the Basic interpreter of the HX.
16K HX-20 Monitor
32K Expansion RAM
16K HX-20 Internal RAM

Only machine language or FORTH programs may be used with this configuration.

To summarize, the 16K version of the expansion board offers more versatility than the expansion unit, at about the same price. It should be noted, however, that the two ROM expansion slots found in the Epson expansion unit are not available on this board. The 48K board requires the development of the appropriate software to utilize the increased memory. It should also be noted that a 128K version of this unit may also be available soon.

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Math Tutor

by Bob Herman

SPEC SPOT

Product: Math Tutor
Type: Educational
Computer: Epson HX-20
System: HX-20 with Microcassette Drive
Required Peripherals: None
Price: $20.00
Ease of Use: Easy to use menu-drive
Performance: Good
Documentation: Good, except for minor adjusting (mentioned).
Summary: A good program for school-age children.
Manufacturer: Brian Lomasky
Article By: Bob Herman

Math Tutor is another fine, menu-driven program by Brian Lomasky. It is available on microcassette and includes 3 pages of complete documention. The user of Math Tutor is first offered the choice between addition, subtraction, multiplication or division problems. The level of difficulty may be varied by selecting between one, two and three digit numbers and whether they are to be consecutive or randomly determined. Once these parameters have been selected, the sequence begins. The problem will appear on the right side of the LCD screen. A count of how many problems have been completed, along with a reminder on how to quit the sequence, will appear on the left. You simply type in the answer. Once entered, the opportunity still remains to alter the answer. Merely use the "delete" key and then enter a new answer. When you are confident that the right answer has been entered, hit the return key.

If the response is correct, you are rewarded with a little musical tune and a vote of confidence on the screen (such as "wonderful" or "perfect"). Incorrect responses elicit a dubious sounding tune and a "wrong" on the screen. Three more opportunities to calculate the correct response are then offered. If, in four trys, you have failed to correctly solve the problem, the answer will be displayed, and you will go on to the next question. When you think you have suffered enough, hit "Q" to end your misery, and a report of your progress will be displayed on the screen and printed on the printer. The report starts out with a determination of the percentage of incorrect responses (in four trys) and relates the number answered correctly in one, two, three, and four attempts. An evaluative declaration of your performance is also included (such as "Perfect" or "Good"). If the addition sequence is selected, there is also an option for a beginner's set of problems with answers less than or equal to ten.

The only comment about the program is that when you enter your answer, you must remember to do so in reverse order; this is not mentioned in the documentation. For instance, if the answer is "317", you must type in the 7 first, the 1, and then 3, as the input on the screen goes from right to left instead of vice-versa. It does take a little adjusting to get used to this procedure, but this is only a minor detraction. A nice addition to the program would be an option utilizing the clock of the HX, and allowing only a certain amount of time for each response.

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QX-10 Products

DOSPLUS IV/A

Now available for the QX-10 is DosPlus IV/A, which includes: (in Epson versions) MSCRIPT and MTERM. These two programs alone retail for $79.95 each. Total package $169.95. Contact: Micro Systems Software Systems Inc., 430118 Oak Circle, Boca Raton, FL 33431. (Watch for our review coming soon.)

HARD DISK AND MULTI-USER NETWORKING SYSTEM

Up to 3 hard disk drives may be daisy chained, and up to 8 QX-10's can be hooked up to the same hard disk drives (we look forward to reviewing this product shortly). Contact: Micro Main Development Inc., 700 N. Valley St., Aneheim, CA 92801.

NEW QX-10 TECHNICAL TROUBLESHOOTING MANUAL

This is a troubleshooting guide for the computer technicians. The manual is very clear, with illustrative pictures on the internal works of the QX-10. It covers disassembly and reassembly proceedures, adjustment and maintenance, repair instructions, and an extensive flowchart troubleshooting section. The cost of the manual is around $50, and most likely will have to be ordered by your dealer.

TAX/PACK

Available in three formats, this program is designed for the Accountant and Tax practitioner. Capable of producing 10 different schedules and 12 various forms. Annual updates of the program are available. For more information contact: Analytical Processes Corporation, 635 Main Street - Nassau Building, Montrose, CO 81401.

JX-80 COLOR PRINTER

This 160 cps printer uses a four color ribbon, and has special printer codes to produce 7 colors: yellow, cyan, magenta, violet, green, orange, and black. These codes can be combined to produce almost unlimited colors, and can use paper up to 10 inches wide. Offering both tractor and friction feed options, the JX-80 features a new SelecType switch panel to avail fingertip control of various typestyles. Offering graphics capabilities and 144 different typestyles, this new printer carries a listed price if $799. Contact your local Epson dealer. This product is slated to be available late summer 1984.

NLQ OPTION BOARD

This Near Letter Quality option for Epson FX/JX series printers is planned for release late in the summer. Production of the near letter quality output is accomplished at 32 cps by a 15x18 print matrix produced by two passes of the printhead. The board also provides for printing at 160 cps in draft mode, and will increase the the standard printer buffer by 6K. The list price is $199. Contact your local Epson distributor.

Print Samples:

Pica.	Pica.
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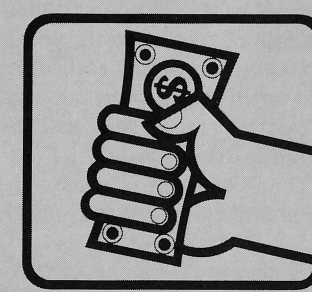
Emphasized.	**Emphasized.**

FINANCIAL PROGRAMS FOR THE QX-10

This collection of eight programs offers the capability of calculating amortization rates quarterly, semi-anually, or annually. You may also figure the net return on an investment in real dollars after deducting income tax on return and adjusting for estimated inflation. Printer output for all calculations is provided. The list price is $20.00. Contact: Brown and Huss, 507 Pleasant Street, Miles City, Montana 59301.



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FTRANS

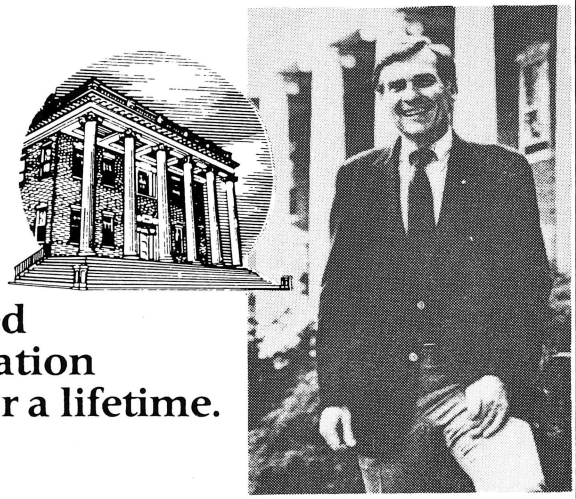
This file transfering / communications utility will allow files to be transfered between any CP/M compatable computers, regardless of disk format differences. Listed price is $59.95.

For more information on the above three programs (or a free catalogue),contact Lyn Durant, Marketing Director, GENERIC SOFTWARE, 190 Timber, Dept 14P, Marquette. MI 49855.

Con't inside back cover

Paul Hardin:

The FIRST CHOICE at Drew University is the EPSON QX-10 Personal Computer.



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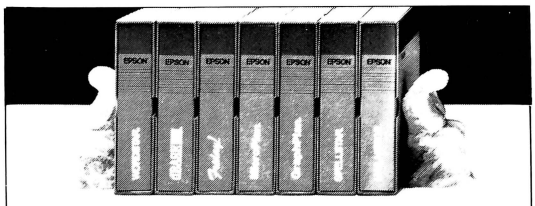

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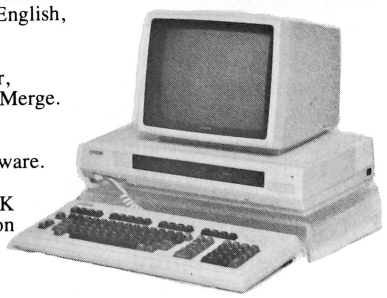

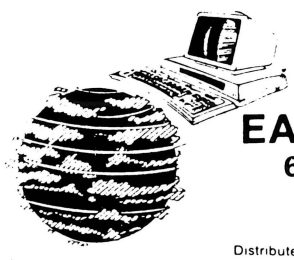

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Sprinter

by Bob Herman

SPEC SPOT

Product: Sprinter
Type: Portable, dot matrix printer; friction and tractor feed
Price: $695
Ease of use: Excellent
Perfomance: Excellent
Documentation: Adequate
Summary: Versatile, 160 cps printer, designed for use with portable computer systems, providing excellent quality dot matrix print characters
Manufactuter: Micro Peripherals, Inc.
4426 South Century Drive
Salt Lake City, Utah
84123

MPI is marketing a near letter quality dot matrix printer for portable computer systems. At 16 pounds, with internal cable and paper storage (up to 250 sheets), and with its shock resistant construction, it is truly a portable printer. It's operation requires it to be plugged into a standard 110V AC outlet. The suggested retail price is $795 (with the serial board necessary for use with the HX-20 an additional $110).

You would expect a portable printer to be quick and easy to set up. With the Sprinter just unlatch and remove the cover, install the power and computer cables, and with the unit's unique front loading mechanism you're all set to go with single sheets of paper. The front loader makes installing single sheets easier than loading a typewriter. Fan-fold paper may be loaded onto the adjustable tractor through either the front or rear paperfeed path. The maximum width of paper allowed is 9.5 inches, including sprocket brackets.

The operator has control of paper advance, top of form set/feed, on line/off line, forms feed, and self-test; all with the keypad located in the right front portion of the printer. The 12 key SoftSwitch keypad also allows finger-tip control of parameters set with dip switches on the basic unit. These parameters include: character font, form length, auto line feed, baud rate (standard settings up to 19.2K baud with an automatic baud rate detection feature), characters/inch, vertical and horzontal tabs, lines/inch, perforation skip, and left and top of form margins. Correct entry of any of these settings is verified by a pleasant audible feedback, while incorrect entry results in a corresponding dubious sounding series of tones. You may also print the status of these settings.

The 7x9 dot matrix character set is bidirectionally produced at a listed speed of 160 cps. The unique High Speed Space Skip capability makes for remarkably fast, though noisy output. The serif style, correspondence font has an 11x9 dot matrix character set. You may also choose from three foreign fonts, double wide characters, and a variety of character densities up to 17 characters/inch. Special fonts may be downloaded into RAM, or permanently stored in ROM.

The print produced is quite crisp, and with true descenders is very pleasing to the eye. The serif font is as close to letter quality as double strike modes on other printers. If graphics is your bag, the Sprinter allows up to 6120 individually addressable dots per square inch.

The interface provided is a standard Centronics parallel, with an optional serial RS232C and IEEE-488 BUS available. The standard 4K buffer is expandable up to 64K. Also avialable are a cloth carrying bag with shoulder strap and AP-PAK application software packages.

The documentation accompanying the unit is fair. We wanted to change the default baud rate from 9600 to 4800. The convience of the SoftSwitch makes changing internal dip switches unnecessary. The listed settings for the dip switches in the appendix were found to be incorrect, and a phone call to the

Con't on page 32

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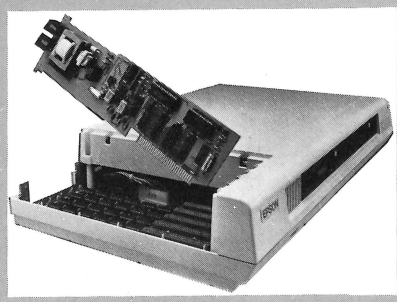
Helpful Hints

CR-103 Modem Notes

The new internal modem for the QX-10, the CR-103, has some problems that users have brought to our attention. We shall present some of these difficulties and the solutions that have been offered by various sources.

One problem associated with this new modem is the fact that when it dials numbers with a "0" in it, the dialer pulses continuously. This problem was encountered using a pulse dial phone and Valdocs mail. Reportedly (from Epsonline), the new version of Valdocs 1.19 rectifies the situation.



Some users calling long distances with the CR-103, have had difficulty locking onto a bulletin board, the problem appears to be a hardware one related to insufficient amplitude of the audio carrier. We understand this was taken care of by Comrex before the official release.

There is also a great deal of confusion as to whether or not MTERM, a communications program on the new CP/M B disk, will work with the CR-103. This program will, indeed, work; it is neccesary to load the program MTERM103.DAT first. To do this, type "MTERM103 MTERM103.DAT" and then hit return. This also will resolve the unsquelched answer carrier difficulty that many report.

Another note about the CR-103 comes from Sysop Tom Fosson. You can use the CHGLIB15.COM (CHGLIB.CPM on some BBS's) to alter the directory of the MODEM103.COM that comes on the disk with your modem. MODEM103.COM is a MODEM798.COM program changed to work with the QX-10 and the 103 modem. The PHONBOOK.ASM file that is on the same disk isn't necessary if you use CHGLIB. This program also allows you to change the directory as often as you wish without having to modify and then assemble the assembly file. Modem 103.COM also eliminates the problem mentioned of dialing zeroes, and also allows file transfers using CRC or Checksum error checking under Christensen Protocol.

Speeding Up Valdocs

The following tips have been suggested by various dealers, distributors, and users. You may want to try some of them out to see which ones you find most helpful when using the Valdocs 1.18 series.

1. Speeding up the cursor movements and auto repeat rates: In the Setup program (by pressing-Menu, Menu of applications, left drive, setup system, return) you will be presented with the main setup menu screen. Select terminal type, and set both Cursor repeat rates to 0.
2. Experience level: In the main Setup menu you can set yourself up at the advanced level.
3. Unlocked Cursor: If you are setup at an experienced level as indicated in q2 above, you can press control Q from the editor, and select this option in the Quirks menu. Select option C, Cursor locked in the Center and press return. This will allow the cursor to move around the screen when working with a document, instead of being locked in the center, as with a typewriter.
4. Quick display: Press Control Q from the editor to select the Quirks menu. Select the Quick Display mode. This will produce a smaller, blinking cursor in the editor. It greatly speeds up the movement, but **NOTE** you will not see Bold, Italics, or Underlining displayed on the screen. If you want to see these, then return to the Normal Display by following these steps again.
5. Break up long documents: If working with very long documents, 20 or more pages, breaking it up into units and storing them separately, can make editing a little faster.
6. Using the Control keys: Learn to use the control functions, like CTRL-W to move to the top of the document, CTRL-Z to move to the bottom, to move more quickly around your document.
7. Using Prior and Next Page: When you wish to move to page 15 of your document, pressing shift-down arrow (next page) 15 times will beat going to the Look For Menu and selecting page 115.
8. Hard Disk: Not many can afford the luxury or have the need for a hard disk, but it does speed things up.
9. Restoring a document: When editing a document that you have already stored and named, you can restore it quicker in the following manner. Use Control Q (Quirks), Store as a non-indexed file. You will see the non-indexed name displayed (eg. 83721015.VAL). Press return to keep the same name. The prompt will indicate next that the file already exists, do you want to delete it Y/N? if you have made some changes then choose Yes, otherwise press No. This speeds up the store process.
10. Throw away the document: When reviewing a previously stored document on screen, and you want to leave it unchanged, do a control M (Miscellaneous menu) and elect the option of erase the screen, throw away the document. This does NOT delete the original document, only gets rid of the current copy in the editor. This is quicker than going back through and restoring it to the same name.

Disk of the Month

These public domain programs are provided on a quality disk, postage paid, in a disk mailer for $15.00. Each disk is identified by a disk code number such as EC-1. When ordering please be sure to indicate the disk number desired.

This month's offering:

EC-2 — CPM Utilities

BACKUP23.LBR - This a is backup program for hard drive systems. Works very well, but has a few problems running under TPM (it doesn't recognize user areas above 16!)

CAT2.LBR - This is a catalog filer program, most useful for hard drive users.

COMPARE.SYS - This program will compare a program on two different drives to ensure proper transfer.

FINDBAD.LBR - This will check a disk with data on it for bad sectors, etc.

HX/2/QX.LBR - This program allows you to transfer files from the HX to the QX or visa-versa.

LDIR.COM - This program lists the directory of a .LBR program for you. Example: A>ldir filename.lbr

LTYPE.COM - This program allows you to type to your screen any file listed .LBR directory.

LU3.COM - This program creates, modifies or extracts files from a .LBR file.

LU3.DOC - This program contains very complete documentation on the LU series programs.

LUDEF3.DOC - This is a brief version of the LU3.DOC.

NI.COM - NI for NewIndex, lists files and their sizes, in alphabetical order.

NSWP205.LBR - THE most useful library, containing a program that will squeeze, unsqueeze, print, manipulate and rename files.

SCAN.LBR - A scanning utility.

SD.COM - SD for SuperDirectory, lists files and their size.

SKIXFER.LBR - A program to convert HX MBASIC files to QX MBASIC.

SYNONYM3.LBR - A neet program that allows you to make one command appear like several.

T.LBR - This program will allows you to strip the embedded commands from any Word Processor (Valdocs, WordStar, etc.).

TRS/2/QX.LBR - This will allow you to convert TRS-80 MBASIC to QX MBASIC.

UNERA.CQM - If you erase a file by accident, and don't write over it, you can use UNERA to recover it.

VFILER.LBR - Another file manipulator utility.

To order this disk send your check or money order in the amount of $15.00 (U.S. Funds) to EpsonConnection, P.O. Box 14027, Detroit, Michigan 48214. Be sure to indicate the disk number you are ordering.

BUSINESS SOFTWARE FOR THE EPSON HX-20

Easy to use, Menu-driven business applications are now available for the EPSON HX-20. All are useable with 16K memory. 32K versions are available. The following specifications are for the 16K versions. Please send for a catalog containing full specifications concerning any of these programs.

1) Database Management System - Allows the user to personally design his own database of up to 165 rows by 5 columns; maximum of 29 characters per record; user-definable report formats; $50

2) HXCalc - Allows the user to construct a spreadsheet of up to 16 rows by 16 columns; up to 3500 characters can be stored in a single spreadsheet; addition, subtraction, multiplication, and division are supported between cells; $50

3) Financial Calculator - Performs Compound Amounts, Direct Reduction Loans, Savings Calculations, and Amortization Schedules at the touch of a button; $50

4) Realtor Qualification System - Will qualify a buyer for a conventional mortgage; $50

5) Century 21 Realtor Qualification System - Customized version of the Realtor Qualification System specific for Century 21; qualifies buyers for conventional, VA, and/or FHA mortgages; produces a very detailed financial report; also computes Direct Reduction Loans and Amortization Schedules; $200

6) CAI Database - Computer Aided Instruction Database allowing the user to create a programmed learning sequence for any subject; $50

7) Inventory Control System - Manages an inventory of up to 255 different items; stores part number, description, quantity on hand, quantity on order, reorder point, and unit cost; a report enables the user to see which items should be ordered; also a complete inventory valuation report; $50

8) Math Tutor - Tutors children in addition, subtraction, multiplication, and division; complete performance analysis when student is done; $20

9) Time Acccounting - Allows anyone to account for time and money billed or spent against any project; capacity of up to 100 different projects with up to 50 different billable activities and up to 140 different billing entries; reports automatically total by activity and project; Can be used as a small General Ledger System, allowing the user to post amounts to 100 different General Ledger accounts; $50

10) Stock Portfolio Management - Stores a complete stock portfolio within the HX-20; allows easy entry of stock purchases, sales, and price updates; A report prints the entire history of a stock, showing the current worth of the user's holdings along with the actual gain/loss-to-date; Graphics option plots a graph showing the trend of any stock; Capacity of up to 450 different stocks and values; $50

11) Patient Alert System - Enables a doctor to enter special "alert" information for up to 26 different patients; the receptionist can search the resulting database by the patient's first and last name in order to see if any special alert information is posted there; Stores the patient's first and last name, miscellaneous description, Dx, Rx, and two alert messages; Each field may contain up to 48 characters; $30

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Dealer Inquires Invited

The New Epson PX-8

A new Epson portable computer was recently released in England and Germany. It's introduction in Germany was portrayed in the May 7 and 14 issue of INFO WORLD, although no real specifics were mentioned. We have received literature on the version of the PX-8 released in England from Terence Ronson, the President of the English HX-20/QX-10 International User's Group. The following description is of the English version of the PX. The physical size of the PX-8 approximates that of the basic HX-20. Equipped with a cover for the 72 key keyboard, handle and flip-up 80x8 LCD screen, the unit appears designed to be quite portable. The microcassette is present, but the microprinter is absent. The similarity to the HX stops here. The Z80 CPU has 64K of RAM and a CP/M (version 2.2) operating system. There are built in drives where ROMS (Wordstar and PortaCalc) reside. InfoWorld reported MicroPro International's announcement of ROM based programs were: WordStar, Portable Calc, and Portable Scheduler. Portable Calc is a 256-line by 64-column spreadsheet. As for interfacing the unit, there is an RS-232C, 8-pin DIN connector that supports baud rates from 75 to 19,200; a serial 8-pin connector supporting 150, 600, 4800, and 38.4 Kbaud rates; bar code interface; and analogue input. NiCad batteries will supply 10-20 hours of operation between charges, with the unit turning itself off automatically after 10 minutes of idleness to conserve power. The screen possesses the capability to be split in half for cross referencing and comparisons. Add on memory packages of 60 and 120K may be attached to the bottom of the unit. There will also be two new disk drives available in England, apparently designed for the PX-8. One is a 3 and 1/2 inch, battery powered portable unit. According to WHICH COMPUTER? (May 1984), a computer magazine published in the UK these drives pack 360KB into a unit less than two inches high and five inches square. The second disk drive is a five and 1/4 drive, called the TF-15. KUMA reports that the TF-20 disk drive will be compatable with the PX-8, using the interface that they have developed.

Again this description is of the English version of the PX-8. No official announcement of a release date for this product has been made for the U.S. market.

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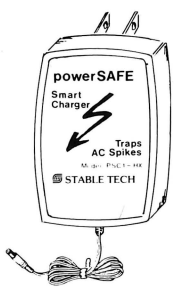

G.W. Smith Associates
62 N. Chapel Street
Newark, DE 19711
(302) 738-7308

HX-20 Products

INTEXT

Intext is an integrated word processing - communications chip. The indicated word processing capabilities of Intext exceed those of Skiwriter. All the operations possible with SkiWriter are available, as well as more sophisticated ones like: line centering, user definable function keys for commonly entered strings of text, printer style control for both dot matrix and daisy wheel printers, text paging, and selective printing of portions of documents. The communications portion of the program allows for single key stroke sending of login and password requirements, toggling the LCD screen on and off, and the sending of documents created in the word processing section of the program with or without the INTEXT control codes used in the creation of the document. The basic program allows for files of up to 12,000 characters in the unexpanded HX, while optional configurations allow for files of 21000, or 29000 characters in an expanded HX. The basic program, for use in either an expanded or unexpanded HX, retails for $145 in chip form, $95 on microcassette, and $237.50 on disk. The optional configurations for expanded HX's run an additional $55. Contact Talbot Computers LTD, 293 Charminster Road, Bouremouth, Dorset BH8 9QW England.

EPSONCALC

This a ROM cartridge contained chip that allows for almost instantaneous loading of a spreadsheet. Providing rather sophisticated mathematical calculations, but not allowing for text input of any length whatsoever, this spreadsheet seems best designed for engineering and scientific applications. The entire 32 x 32 cell spreadsheet may be saved on tape, or output to an external printer. The suggested retail price is $50 (the ROM cartridge is an additional $45.00). Contact your local Epson dealer.

PARALLEL INTERFACE

Designed for use with the ITE chip, the Transam parallel interface offers an 8 bit bi-directional port with control signals, two 8 bit parallel output ports with output enables, and two 8 bit parallel input ports. This device reportedly allows for straight forward hookup to a parallel printer, making it possible to output text to an external printer while in the terminal mode. This is handy when the serial port is occupied by the acoustic coupler. The suggested retail price for the unit is $162.50. Contact Transam Microsystems LTD, 59/61 Theobald's Road, London WX1X 8SE England.

HELPFUL HINTS

SkiWriter, EpsonLink, SmarTerm and the ITE chip may not be used with the display controller or the TF-20 disk drive. To our knowledge there is no commercially available communications or word processing program that supports the display controller. There are, however, two English word processor programs - INTEXT and FFOSSWRITER - that are available and do support disk format.

The maximum length of any SkiWriter file is 10,000 characters, regardless of the presence of an expansion unit or board. This is five to six pages of double spaced text.

Hook the HX-20 up with an Apple IIe by switching the connections on pins 2 and 3 of the Epson 715 cable.

PARALLEL PRINTER INTERFACE

Another parallel interface for the HX-20 is also available. Promising to eliminate the need for individual serial boards at approximately the same cost, this type of device frees the RSC232 port for communications. At a suggested price of $120 for a basic HX, and $150 for the expanded Hx, the device attaches to the expansion port and resides either in the expansion unit position or on top of the expansion unit itself. Contact: Marlow & Associates, 136 Lowell Street, Somerville MA 02144.

FLYPLAN

This is a flight planning program for the HX-20. This program allows for the planning of entire cross country flights, for the calculation of true course, wind correction, true airspeed, groundspeed, etc. Based on rule of thumb navigation, this microcassette program maintains a tape database of airport/VOR locations and is capable of generating checkpoints with enroute VORs. Contact Joe Smiley, 8A Anthony Circle, Newark, DE 19702. Retail cost $25.

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Software

Qplotter Con't from page 9

ate can be stored with the STORE key, and retrieved at any time. Likewise you may dump the screen to the printer. As with any quality program, MSI didn't forget an edit mode, so you can alter a screen, without redoing everything.

CONCLUSION

For twice the price this is a real deal, and Epson makes the only machine that'll handle it. There are many facets to QPLOTTER. It is a very powerful tool which has done justice to the internal 7220 GDC chip. Users will find themselves at the keyboard for hours as the variations keep increasing. Paint, draw, sketch, design....explore!

Look for the review of Qdirect in a forthcoming issue of the Epson Connection.

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Friday Con't from page 20

file design. Displayed is also a status line allowing for 32 fields with a total length of 999. I almost forgot if you want to protect the information in these files from inquisitive eyes you can use passwords. The file design allows for a Field Name, limited to ten characters. "Type" 'anything' for descriptive fields, 'math' for fields used in computing, 'yes/no' for things such as reorder. When we set up an inventory file it's possible to do computations on the values by setting up formulas. All that needs to be done is to go back to the main menu and choose "C" for Other Activities and select Computed Fields from the menu displayed by Other Activities. The formula is entered for the field to be computed, saved, and anytime the inventory is updated the computed information is also updated.

When a new file is created Friday gives us a screen layout called Friday/Form, a rather rough, utilitarian, hard to read screen when entering new data or making changes. Well our girl Friday is nice to us. She allows us to design a screen layout that is easy to read and understand. The information can be placed anywhere and in any order we want it on the screen.

Back to the main menu and this time select "B" to Retrieve Data, another menu appears.

A-View/Edit Records
B-Quick Report
C-Custom Report
D-Report Lookup
E-Mailing Labels

View/Edit Records allows us to look at records selectively at random or sequentially and at the same time add or change information, in other words update our files.

Quick Report allows the design of a report that will pick out specific information from the data files. Using the file Inventory you can create a price list for specific items. How? First, Friday displays a "Quick Reports" menu to name the report and give a description. Next, Friday helps design the report printout, as to width, length, title, underlinig, line spacing, totals, subtotals, and whether or not to use a summary. Then, Friday displays all the fields used in Inventory and asks: What fields do you want to use in your report? What rule for retrieval? What field or fields to sort on? How much of the file to search? After all these parameters are established the report is saved and is ready to use to print the information you desire. the Quick report possibilities are limited only by one's imagination.

Custom Report allows the design of a form letter to be used and merged with your mailing list or you can do a tax form, an expense voucher, a time sheet or any other business form. The Custom Reports also permits the design and printing of mailing labels.

And Friday works with other computer programs. The data from Friday files can be used by WordStar and by 1-2-3S. And all the Friday data files are compatible with dBASE II, a sophisticated database management system.

TRY IT YOU'LL LIKE IT. ▲ ▲ ▲

Hardware

Sprinter Con't from page 26

manufacturer was necessary to ascertain the correct ones. Technical support was immediately available on phone, and provided the needed information.

One feature not found is a manual paper-feed knob. With the control that the SoftSwitch keypad offers, though, this is but a minor detraction.

The number of character fonts available with the Sprinter is quite limited, unless you want to design your own. The portability, versatility of forms control, speed, and print quality make this printer extremely attractive. Especially nice is the top of form margin setting, which makes using letterhead stationary very convienient.

We found the use of the Sprinter with the HX-20 extremely convenient. It provides automatic page breaks for skiwriter text files, and yields a high quality output. This is a flexible, easy to use, and fast portable printer.

SoftSwitch and Sprinter are TM by Micro Peripherals, Inc. HX-20 is TM by Epson America, Inc.

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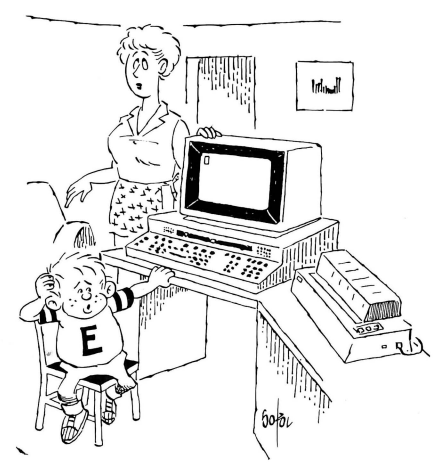


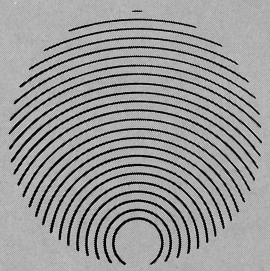
"Mom! It doesn't matter what I do the monitor reads I'm waiting for 2.0!"

NEWS NOTES

The spring comdex show held in Atlanta brought forth some more new products for our Epson computers. The Epson booth displayed several new products which will be available in the coming months. In the printer corner there is a new Epson JX-80 color printer. It produces 7 colors using a four color ribbon: yellow, cyan, magenta, violet, green, orange, and black. A convenience provided is a SelecType switch panel allowing the user to select the following print modes: compressed, expanded, elite, emphasized, italic, doublestrike, underline, superscript'subscript, and 1-inch skip over perforation. Operation is at 160 cps with reverse line feed possible in the friction feed mode. There are seven different dot addressable modes, from 60 to 240 dots per inch. The LQ1500 and RX-100 were featured and drew attention from the crowd. Scheduled for release late summer is a new internal board for the JX and the FX called the NLQ Option Board. This NLQ (Near Letter Quality) board produces print of high quality by taking two passes of the printhead, making a 15x18 print matrix. It allows for 160cps in draft mode, and 32cps in the special near letter quality mode. It also increases the buffer size of the printer by 6K.

The QX-10 will soon be sporting a newly stylized keyboard. It is a Brother keyboard with one extra key in the applications section. The EDIT key is located between the MENU and CALC keys. Our original keyboard will perform the same function by using control line, never fear. The function of this key will be with Valdocs 2.0. It will bring you back to the editor from wherever you are in one step rather than having to perhaps go through several UNDO sequences. There are a few other differences to be found. The new one is much thinner and lighter. It has snap up legs like the IBM, rather than the twist and adjust ones we currently have. There is a smoke grey plastic overlay around the the special function keys, a dimple on the numerical 5 key in the number pad area, and the control keys have been moved outward a space from the spacebar. The keys are lower profile and the surface is .1 cm. larger in each direction. One significant change is key rollover. With the original keyboard, if you typed two keys at the same time, only one would print out, with key rollover, both will be printed. Other items to notice are some added markings on the front front of some keys: MAR REL has ESC , LINE has PARA. and WORD has SENT. . Is it worth changing? Not as far as your editor is concerned. Having tried out both I find no preference for one over the other.

Metro Software Inc. demonstrated their new Qplotter program. It provides many



enhancements over the first edition. There is a figure library feature, which is like having different volumes in a library. You can store up to 64 different figures in a figure library volume, and can have numerous volumes. Any figure can then be retrieved from any volume, placed on the screen, rotated two dimensionally, or moved around on the screen. Figures can be enlarged or reduced infinitely. Animation effects can be produced in the Qdirect mode, with repeat rate and delay selectable. They have interfaced a joystick and mouse with their program, and have provided the software to interface with plotters.

Micro-Main Development, Inc. demonstrated their multiplexor system for CP'M systems with the QX-10. They use a RAM Cache system, allowing fast access to data, and simultaneous service to several micro computers. The controller can operate up to four physical drives, and the multiplexor can handle up to 8 computers. The units are designed for multi-user operations and are delivered pre-assembled ready to plug in. A typical system consisting of a 24MB Hard Drive, 4 port multiplexor, and computer adapter boards for 4 QX-10's will run around $6,000. Their software link program allows disk and file sharing.

Another product of interest, not yet configured to work with our Epson, was an optical reader, Omni-Reader, by Oberon International Ltd. This unit (around $300) has an optical device which will scan printed text, and input it into your word-processing program on the screen. It attaches through a serial RS232C port. It can scan words forwards or backwards. It was demonstrated inputting text into a Wordstar program. Software has already been written to interface it with the IBM PC and XT, and Apple 3E. This can be a very useful device for a wide variety of applications.

A laserjet printer the size of a small copy machine was demonstrated by Hewlett-Packard. It indeed gives typeset quality print, with plug-in cartridges for multiple fonts. It produces 300x300 dots per inch, and at 8 pages per minute (about 300 cps). This connects to the RS232 interface (9600 baud), and currently works with the Hewlett-Packard and IBM-PC and compatible products. There are a wide variety of software packages that work with it, Wordstar, Microsoft Word, Lotus 1-2-3, as well as many others. This retails around $3500.

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Software Review

EpsonLink

by Bob Herman

SPEC SPOT

Product: EpsonLink
Type: Communications on a ROM chip
Computer: Epson HX-20
Required Peripherals: Microcassette drive and modem with necessary cables
Price: $59.95
Ease of Use: Excellent
Performance: Reliable with some text editing limitations and slowness of online data storage
Documentation: Excellent
Summary: Easy to use with a few limitations
Manufacturer: Epson America, Inc
2780 Lomita Blvd
Torrence, CA 90505

EpsonLink is a communications software program available in three different formats on a ROM chip. It may be installed in either a ROM cartridge, directly into the HX-20, or in the expansion memory unit (the form used in this review). The performance of the three chips reportedly varies only in the size of the edit buffer allowed. A 78 page instruction manual is included.

As with SkiWriter, when the HX is reinitialized you must first enter BASIC before using EpsonLink. Being a menu driven program, you first encounter the following alternatives:

1) Text Editor
2) Terminal Emulator
3) Exit (from EpsonLink)

TERMINAL EMULATOR

You are immediately online when this option is chosen. The 10 control functions available are initiated by the HX-20 function keys in a manner similar to SkiWriter. These functions include: Pause/Continue, Tape Receive, Tape Transmit, Setup, Exit, Printer/Modem, Block Receive, Block Transmit, and the two available screen buffer formats; 20 char. X 80 lines, and 80 char. X 20 lines. A plastic function key overlay is included with the package. The two buffer format options seem to offer little flexibility or memory capacity, however the other functions augment this apparent deficiency. The screen buffer will contain only a little over 1.5 K of information, and there is no prompting as to when the capacity has been reached. New information is accepted, while the excess at the top of the buffer is scrolled out of memory. The Pause/Continue key allows transmission to be halted at any time, allowing inspection of the buffer contents with the scroll keys. Hitting this key again reinitiates the transmission.

If you want to retain information, then the Tape Receive function may be chosen at any time during transmission. Data flow will be halted as you are prompted for a filename under which to store this information. Manual cassette operation is also available. Once a filename has been entered, all incoming information will be stored on tape. Storage will be done in small intervals. As data comes in and is recorded, transmission will be briefly interrrupted. This actually allows for an almost limitless buffer. The Tape Transmit function operates in exactly the same manner, sending data out instead of recording what is coming in. The tape operations involved slow down the transmission somewhat.

The setting or checking of communicatons parameters is accomplished by the Setup key. A separate screen is displayed for each parameter; relating what the setting currently is, what the options are, and how to elect each option. The parameters controlled by the program include: bit rate, stop bits, parity, half/full duplex,

Con't on page 36

 Con't from page 19

library of programs dealing with whatever the filename on the library file is, i.e. MODEM.LBR, GAMES.LBR etc. You can usually see what is in the library by using the BBS utility called LDIR.COM which is usually found on most systems. To use LDIR to see what is in the library just type LDIR [FILENAME] [RET]. The [ ] are not to be typed. For example, if you wanted to see what was in the library called GAMES.LBR you would type LDIR GAMES [RET] and the program would list out the programs contained in the library. Lets assume that you want to remove the programs from the library called GAMES.LBR. First, make sure that LU.COM and the library file are on your disk for the sake of easier use. You can do this with LU on one disk and the library on another by simply including the drive name that holds the file you want to work with. Now, bring up LU by typing LU at the 'A' prompt. You will be presented with the following logon sequence:

Library Utility Ver:3.xx 83-08-16 1983 Written by: Gary P. Novosielski

-? O/A: <

The ? indicates that the program is awaiting a command from you to get started. You must first open the library and bring it into memory. To do this simply type -O (for open) at the prompt and hit a return. Each command for the LU program requires you to put a '-' before it. Now type in 'GAMES' on the next line and hit another return. You now have the library in memory ready to proceed. If you want to look at whats in the library issue the list command '-L' and another return. Now its time to extract all the files from the library and put them outside the library so you can use them. To do this you must first make sure that there is enough space left on the disk to hold the programs. You can make sure by leaving an amount of space, equal to the size of the library file. Now lets do it by issuing the command to extract at the prompt, '-E':

-O O/A: <-E [RET]

Lets remove all the programs from the file and put them on the default drive which is the A drive.

-E O/A: <*.* [RET]

The asterisk is a wild card and tells LU to remove all members of the library and put them on the default drive. You could have put them on the 'B' drive by placing the drive name in front of the asterisks, i.e., B:*.* [RET]. You can now sit back and watch as the program goes to work and extracts all the files or programs for you. When the program is finished just hit a carriage return and the current library will be closed and you will be returned to the operating system. You could have removed just one program by just typing in its filename without its extension, or you could use wildcards to remove more than one. This discussion is just a beginning use of the Library Utility program, therefore I strongly suggest you also download the complete documentation for the program to obtain a complete and detailed description on the uses of this fine program (LUxx.DOC). I am sure you will enjoy using it, so have fun.

Viva Valdocs

▲ ▲ ▲

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NEWS NOTES

Con't from page 33

Why mention products that don't yet work with our Epsons? One of our goals is to see the Epson continue to gain in the marketplace. We must help hardware and software manufacturers become more aware of our existence and presence in the marketplace. Putting pressure on them to include the Epson on their lists of compatible products is an important step. After all, Epson USERS are x1 in compatibility.

Rising Star Industries has a new product support person to accept your calls and answer questions. Dennis Dreyer is a special addition to their staff. He comes to them from the San Diego Users Group, where he holds the position of secretary. Rising Star has committed themselves to an aggressive product support approach. There are two numbers to reach Dennis at: (213) 373-3154 and (213) 257-4665. They are guaranteeing turnaround time on answering questions and providing assistance of 24-48 hours (under normal conditions). Lynn has been promoted upward to Product Support Network Manager, never fear she is still there helping just as much as ever. Another part of their support is their new Field Product Support Network. They have started a network of support in the field via three new part-time specialists. William Coxe in Baton Rouge, LA, Jim Jeter in San Diego, CA, and Bruce Kinney in Dayton, OH. They will be handling support via BBS's.

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EpsonLink

Con't from page 34

character length, auto line feed, and pause and continue transmission characters.

The Printer/Modem function key serves as a toggle switch to direct the output either to the microprinter or to the RS-232 port. The Christianson protocol is followed by the Block Receive/ Transmit functions, making transfer of files from RBBS's with XMODEM possible.

TEXT EDITOR

The Text Editor operations of EpsonLink provide a mini word processing capability. Margins and tab control, tape operations, and text insertion and deletion functions are all provided, again with the use of the computer's function keys.

The Editor allows for the composition of a document of up to 200 lines (a little more than three single-spaced typed pages). A screen status indicator displays the line and character of where the cursor is currently located, as well as indicating whether you are in the normal or insert mode. Using the Text Editor is much the same as using a typewriter. It is line oriented and requires use of the return key unlike SkiWriter. You may insert lines of text, either from the keyboard or microcassette. Insertion of characters into individual lines may result in the loss of characters at the end of the line, since there is no automatic scrolling.

Exiting Text Editor erases its contents. What this means is that you may not compose a document and then go directly to the Terminal Emulator function and send it out. You must first save your composition to microcassette and then exit to Terminal Emulator, using its Tape Transmit function.

The use of SkiWriter prepared documents is not mentioned in the instructions, and attempts to do this were unsuccessful. The documentation itself is quite complete and easy to comprehend. One glaring omission, however, is mention of the necessary dip switch changes needed when this unit is installed. As mentioned in our Nov/Dec issue, installation in the expansion unit requires: the expansion box dip switches be set to off-on-on-off (sw1-4) and the two small jumpers should be on B. Our recommendation is to let your dealer install this, as chip damage can happen from static charges and pins can be bent needlessly.

SUMMARY

EpsonLink provides the convience of SkiWriter with respect to ease of use. Learning how to use it is rather simple. You may easily determine or change your communications parameters. The use of the microcassette as a buffer provides an almost unlimited capacity in this respect. The slowness of the microcassette almost doubles the online time required to record a buffer of any size. The Text Editor is sometimes frustrating to use, because of its line orientation, and indirect microcassette connection with the Terminal Emulator. Also, without an expansion unit, there is room for only one ROM chip. You can not have both SkiWriter and EpsonLink installed simultaneously. To accomplish this however, the ROM cartridge version of EpsonLink should be elected. The ROM cartridge costs around $40.00.

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QX-10 Con't from page 24

TLC LOGO

This LISP based language is now available for the QX-10. An object oriented language, it is unlike most LOGO's in that it is functional rather than procedural. Contact: The Lisp Company, P.O. Box 487, Redwood Estate, CA 95044.

E-Z CODE

Use this disk to imbed codes in a Valdocs created document to fully utilize the capabilities of your printer. Containing 22 programs that perform all of the Console, Disk and Printer I/O, there is also a program to assist the beginning assembly language programmer. The suggested price is $35. Contact: J.E.L. Enterprises Inc., P.O. Box 19793, Orlando FL 32814.

RX-100 PRINTER

The RX-100 is able to handle paper up to 15.5 inches in width. This new Epson printer is in other respects similar to the reliable RX-80. Offering both tractor and friction feed, the 100 cps printer allows for the output of spreadsheets, ledgers and other wider than normal forms. The suggested retail price will be $699. Contact your local Epson dealer.

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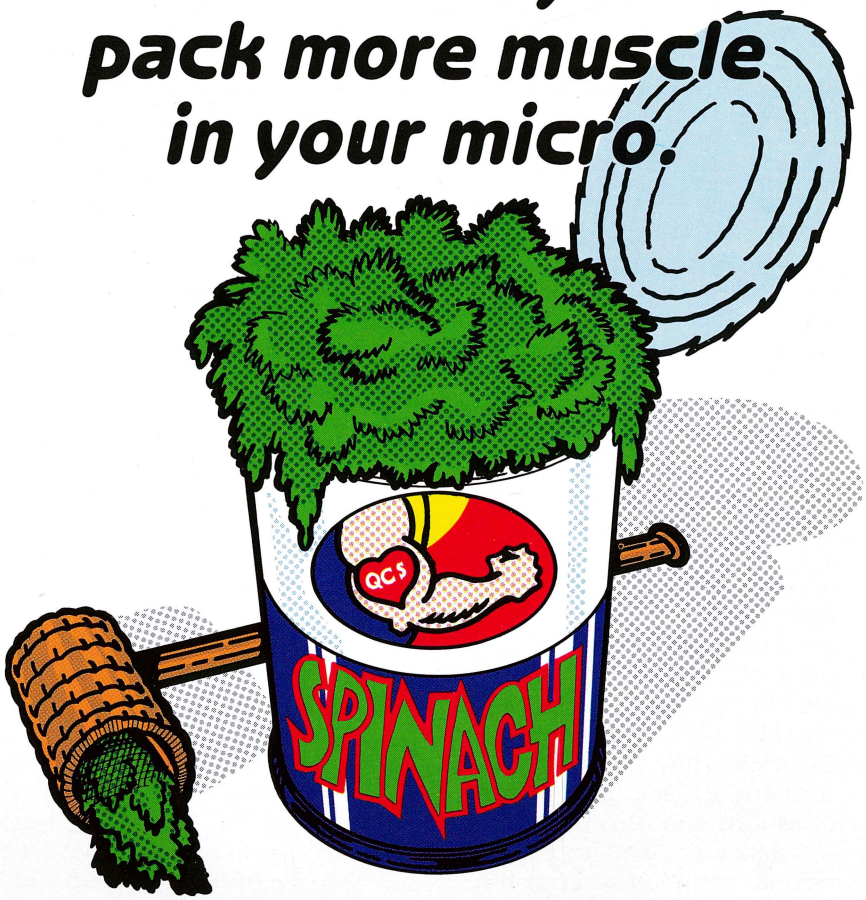

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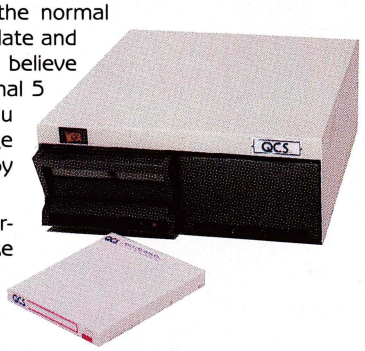

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